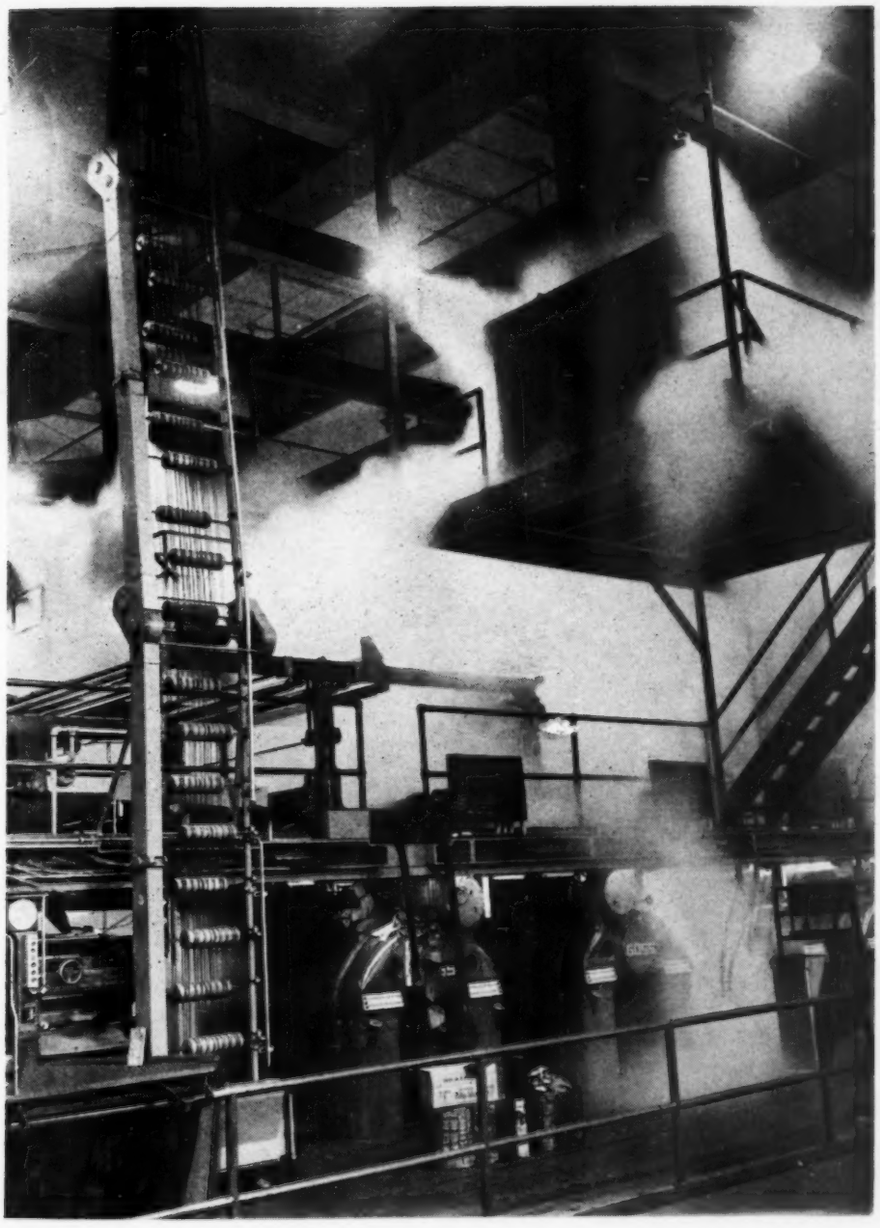
PRINTING PRODUCTION



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Great Lakes Papers Search Out Improved Methods

1959 Printing Week Celebration in Cities

A Printer Presents Worm's Eye View Of Composing Room

'Mistifying' Scene Shows Fire Protection at Chicago *Sun-Times*
(SEE PAGE 5)

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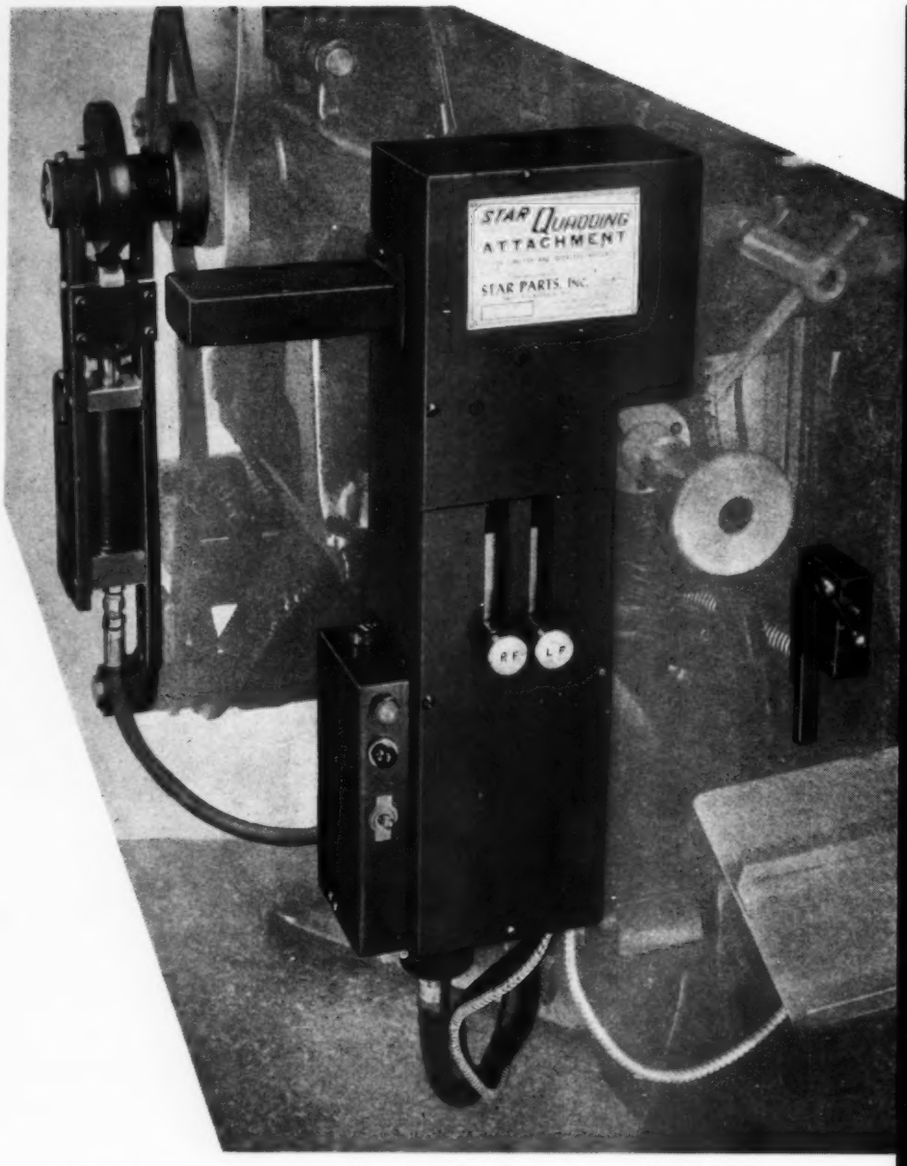

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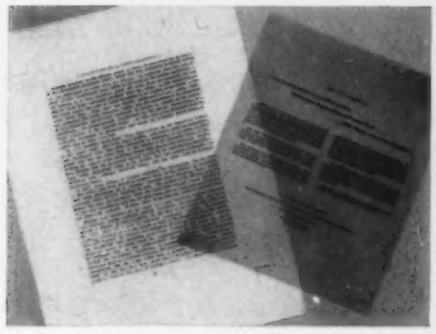

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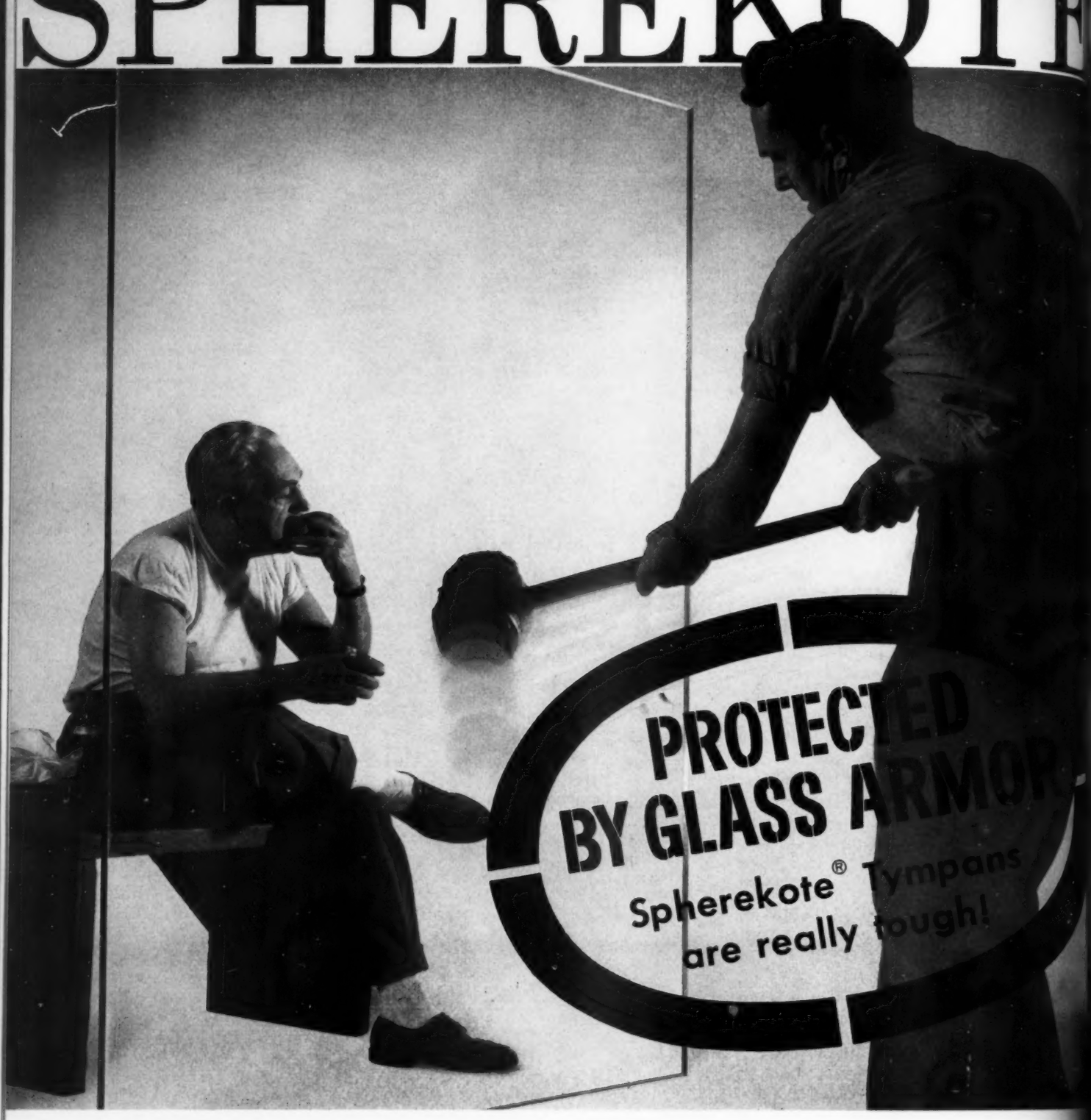

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FEBRUARY 1959
VOL. 89, NO. 5

PRINTING PRODUCTION

formerly PRINTING EQUIPMENT *Engineer*

Published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in all major processes of the Graphic Arts industry.

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OUR COVER: This somewhat "mistifying" scene occurred in the Chicago *Sun-Times* pressroom. It was taken during test operation of a carbon dioxide (CO_2) fire prevention system after installation. Protection is provided for six presses, four ink mist filters and two control cubicles. Fire detection is automatic. There is a battery of 105 thermostats, 102 discharge nozzles and four hand hose reels. The system is fed by a 12,000 lb. capacity storage unit in the basement. Thermostats, fixed over the press units, are set to operate at 160 deg. When that temperature is reached, a 20 sec. warning blast sounds, giving employees time to leave the area. Then the carbon dioxide pours from the overhead spray nozzles in the form of dry ice and vapor to put out the fire. Spray lasts 1 min.

LETTERS

TO THE EDITORS

Don't Ignore Manpower

I feel the articles in your magazine are excellent and any printer who is interested in improving his productivity should make your magazine a reading must.

More consideration, however, should be given to the problem of manpower in printing plants. After all, of what avail is it to have a fine building and top-notch equipment if you don't have the right kind of people to operate the equipment, manage the plant and sell the product? Too many printers are still ignoring the problem of their manpower needs and are simply concentrating on physical facilities.

Samuel M. Burt, Managing Director
Education Council of Graphic Arts
Washington, D. C.

Support for Education

The Southern Graphic Arts Assoc. and Southern Institute of Graphic Arts has enjoyed a successful year. The splendid support . . . of your valuable magazine has been a great help towards this success.

I am not unmindful of the fact that it is people like you whose kindness and interest in printing education has made my work a lot easier than it otherwise would have been.

Charles E. Kennedy,
Executive Director
Southern Institute of Graphic Arts
Nashville, Tenn.

Letouzey Not in Agreement With Preucil

You published an article, *LTF Color Survey Report* by Frank M. Preucil, in the May 1958 issue.

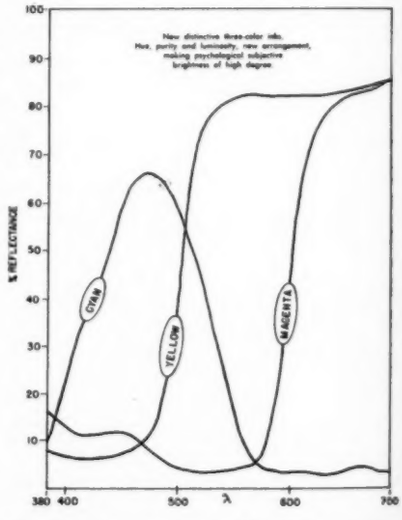
May I say I am not in agreement with the author regarding the principles of his method and the validity of judgements according to the results?

Color is defined by three components: Hue, purity and luminosity; it is tridimensional. What is luminosity, percentage of black, was said purity, percentage of white, by Preucil. No question of purity in the method, as a matter of fact, despite the importance of the purity in color measurement and appreciation.

On the other hand, in this method, paper is integrated by the densitometric measurement of Preucil. Why, of course, compare gamuts of inks printed on different papers as done by Preucil!

In this country, as in Belgium and Italy, ink manufacturers are introducing a new gamut of inks noteworthy for hue, purity and luminosity—very different from the inks analyzed by LTF.

Enclosed are spectrophotometric curves by the General Electric Co. recording spectrophotometer.



Letouzey's G. E. spectrophotometric curves.

It is superfluous to add that the measurements noted in the text of the LTF papers do not agree with those made with the spectrophotometer regarding the colors of the inks printed on the LTF chart—paper included or not.

Here was established a very interesting equation concerning the mixture of purity-luminosity, and another for the pigmentation of the ink, indicating the

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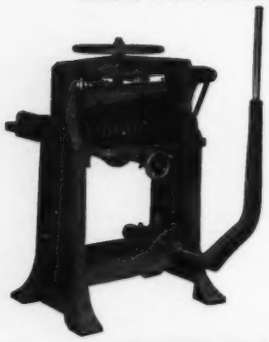

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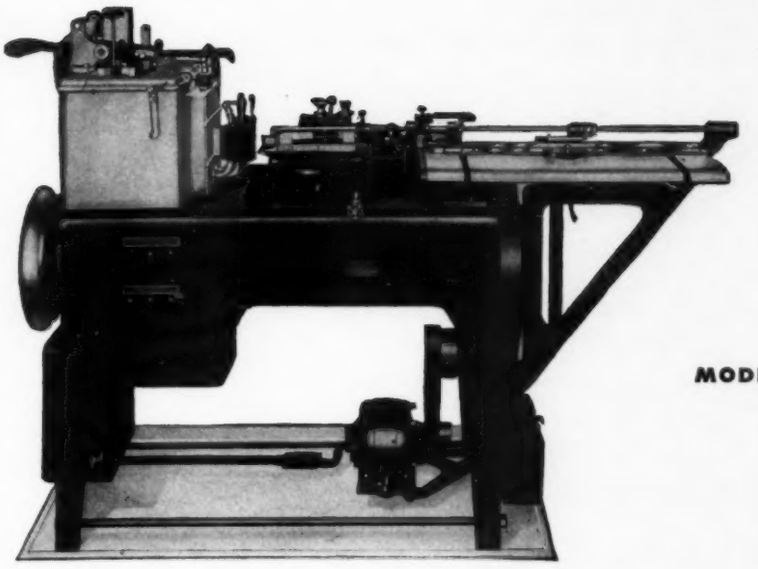

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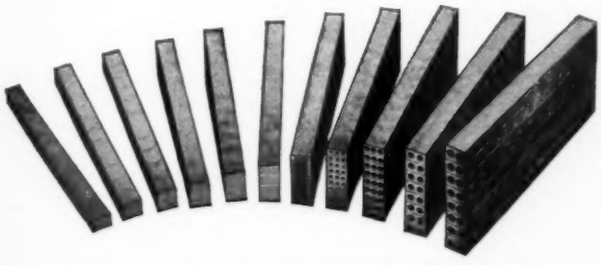

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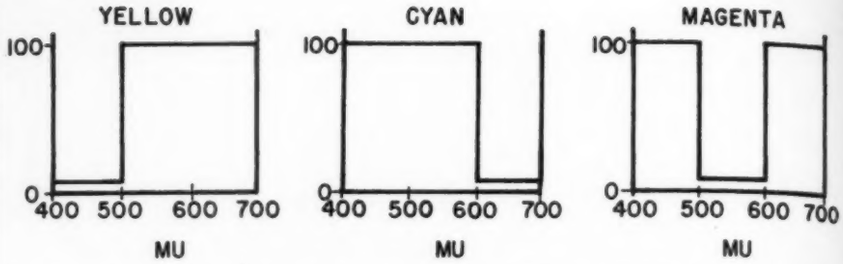

Densitometric measurements are simple and easy to make. They rate inks according to their ability to reproduce the original as it was photographed through those particular filters.

limit for the better the interest in maximum convenient pigmentation for three-color inks.

It must be noted that no nôtice appears in the LTF papers on screen fineness despite the effect of fineness on color result.

Victor Letouzey,
Bourg-La-Reine, Seine,
France

EDITOR'S NOTE: PRINTING PRODUCTION asked G. L. Erikson, vice president of the Inter-Society Color Council, to formulate a reply to Victor Letouzey's letter printed above. His comments, we are sure, will help clear up the approach to color determination procedures respecting the making of printing plates.

Erikson Replies

Regarding Mr. Letouzey's comments on Frank Preucil's *LTF Color Survey Report* (May 1958 *Printing Equipment Engineer*), his language is not quite clear to me. But it is evident Letouzey does not go along with present day thinking on color science in this country.

He is confusing the psychological three dimension visual system with spectrophotometric measurements. These two are entirely different ways of defining a color. It is true that they can be related by some rather complicated calculations, but neither of these should be considered when discussing the Preucil paper.

Letouzey misunderstands the whole idea behind the LTF system. He should study LTF's Research Progress No. 38 for more information.

Color men do not all agree that Preucil's is a correct colorimetric procedure but it is a simplified method of relating process inks to the color separation filters and masking techniques used for making the printing plates.

The densitometric measurements are simple and easy to make and they do rate inks according to their ability to reproduce the original as it was photographed through those particular filters.

Perfect process inks should give spectrophotometric curves like the one I have drawn in the accompanying charts.

Process yellows are fairly close to the ideal yellow as you can see by comparing Letouzey's yellow curve. Our yellows give much the same type of curve.

We believe our cyans and magentas are a little better than Letouzey's but they are still a long way from the perfect process colors.

A good magenta should reflect more of the blue rays in the 400 to 500 mu range and the cyans should reflect more green from 500 to 600 mu.

So much for the defense of Preucil's method.

Letouzey's complaint about Preucil's use of the color terms is not valid because in all colorimetric work we measure what he calls luminosity as the amount of light reflected—not by the amount of black. After all, light is energy and can be measured. Black is simply the absence of energy and as such measures zero.

Preucil also explains that different papers will give different results. The ideal paper should reflect all of the light which strikes it. Unfortunately, no such paper exists. What we measure is the combined result of the absorption or reflectance characteristics of the paper-ink combination.

After all, this is what we have to sell (not the ink itself) but how that ink looks on paper.

In this country the terms becoming generally accepted for the three dimensions of color are: Hue, lightness and saturation. We believe these terms describe the qualities of color better than the terms used by Letouzey, namely: Hue, luminosity and purity.

Preucil's work was not intended to relate process ink measurements by densitometry to their spectrophotometric curves. This is an entirely different approach. Preucil's method only relates inks to the filters used for color separation work and to the masking methods in general use for color correction.

Inkmakers are striving constantly for better process inks and we believe that Preucil's method of rating inks according to these filters is being helpful in this effort.

In his last paragraph, Letouzey's criticism is valid, because in this preliminary survey, no work on the screen fineness was included. This is important. But after all, that is another study in itself and a long one.

G. L. Erikson, Vice President
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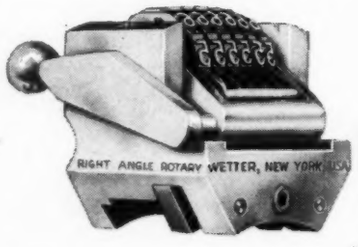
City_____ Zone_____ State_____

For More Information Circle 193 on Reader Service Card

WETTER
PARALLEL ROTARY

Accurate and *rugged!* Wetter Parallel Rotary features hardened steel number wheels with heavy-duty ratchets, number faces custom-curved to fit press cylinder. One-piece, curved-base steel frame has exclusive Wetter Quik-Lok clamping gib, minimizes set-up time, needs no mounting ring adapters.



WETTER
RIGHT-ANGLE ROTARY

For high-speed numbering at right angles to impression cylinder. Both rotary models are available with Roman or Gothic figures, and can be operated from the same cam and mounting ring. Wetter Numbering Machines assure perfect number sequence, crisp, accurate register, clean, sharp impressions — every job.

NONPAREIL MODEL — for use on large diameter cylinder, bed and platen type presses.

LOCK-WHEEL MODEL — for small diameter cylinder presses. Patented lock bar prevents throw-over at highest speeds. Both Nonpareil and Lock-Wheel models available with Roman or Gothic figures, in 5, 6, 7, and 8-wheel types.

For information and prices, write today to

4718

WETTER NUMBERING MACHINE CO.
ATLANTIC AVENUE & LOGAN STREET · BROOKLYN 8, N. Y.
ONLY UNION MADE NUMBERING MACHINE IN U.S.A.

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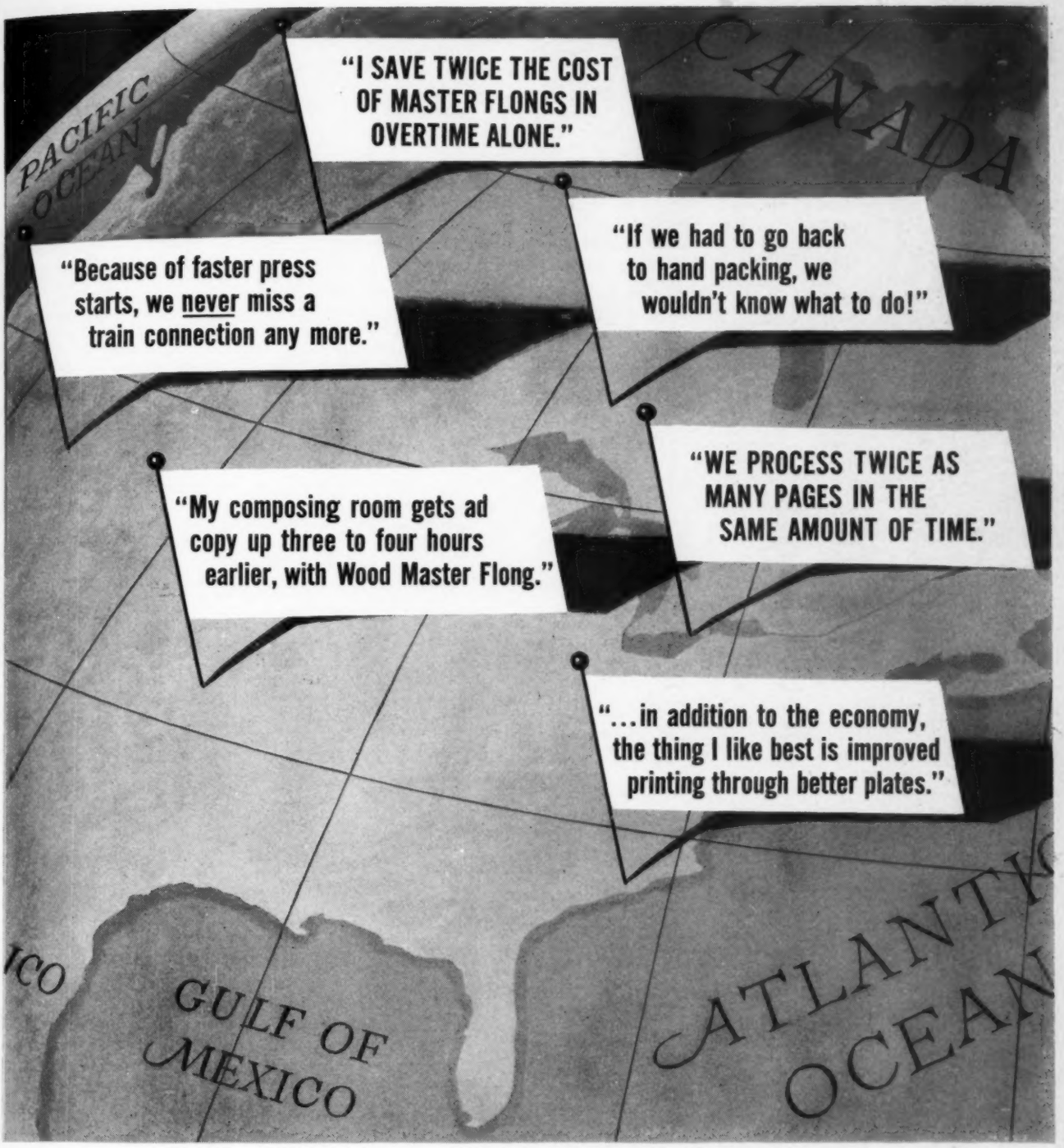
"I SAVE TWICE THE COST OF MASTER FLONGS IN OVERTIME ALONE."
"If we had to go back to hand packing, we wouldn't know what to do!"
"Because of faster press starts, we never miss a train connection any more."
"WE PROCESS TWICE AS MANY PAGES IN THE SAME AMOUNT OF TIME."
"My composing room gets ad copy up three to four hours earlier, with Wood Master Flong."
"...in addition to the economy, the thing I like best is improved printing through better plates."
PACIFIC OCEAN
CANADA
GULF OF MEXICO
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you can take their word for it!

These are quotations from some of America's leading daily newspapers. For full information on HOW to save time and money while improving printing quality, contact us today.

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HOOSICK FALLS, NEW YORK

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WOOD FLONG

SERVING THE GRAPHIC ARTS INDUSTRY EXCLUSIVELY SINCE 1911

For More Information Circle 189 on Reader Service Card

NEWS ITEMS

Ad Man of the Year—William T. Clawson, advertising and promotion director, Harris-Intertype Corporation, was recently named Industrial Advertising Man of the Year for 1958 by *Industrial Marketing* magazine. He was selected from hundreds of candidates studied by the Copy Chasers, a group of advertising experts who prepare a monthly column for *Industrial Marketing*.

CLAWSON

MAHONEY

New Executive Vice President—Thomas P. Mahoney has been named executive vice president of American Offset Corp., 1239-43 N. Madison Ave., Chicago 7. This firm's accounts consist mostly of printing for national distribution with multi-color work being the large part of production. Last year the firm installed a second four color 52 in. by 76 in. press and a four color web fed offset press.

For the past 8½ years Mahoney has been associated with Regensteiner Corporation, Chicago, first as plant manager and later on as vice president. He is active in technical and educational work, being a past president of the Intl. Assoc. of Printing House Craftsmen. Currently he is serving as chairman of the promotion committee of the Lithographers and Printers National Assoc.

STEWART SCHMIDT RUHL FOX ALEXANDER

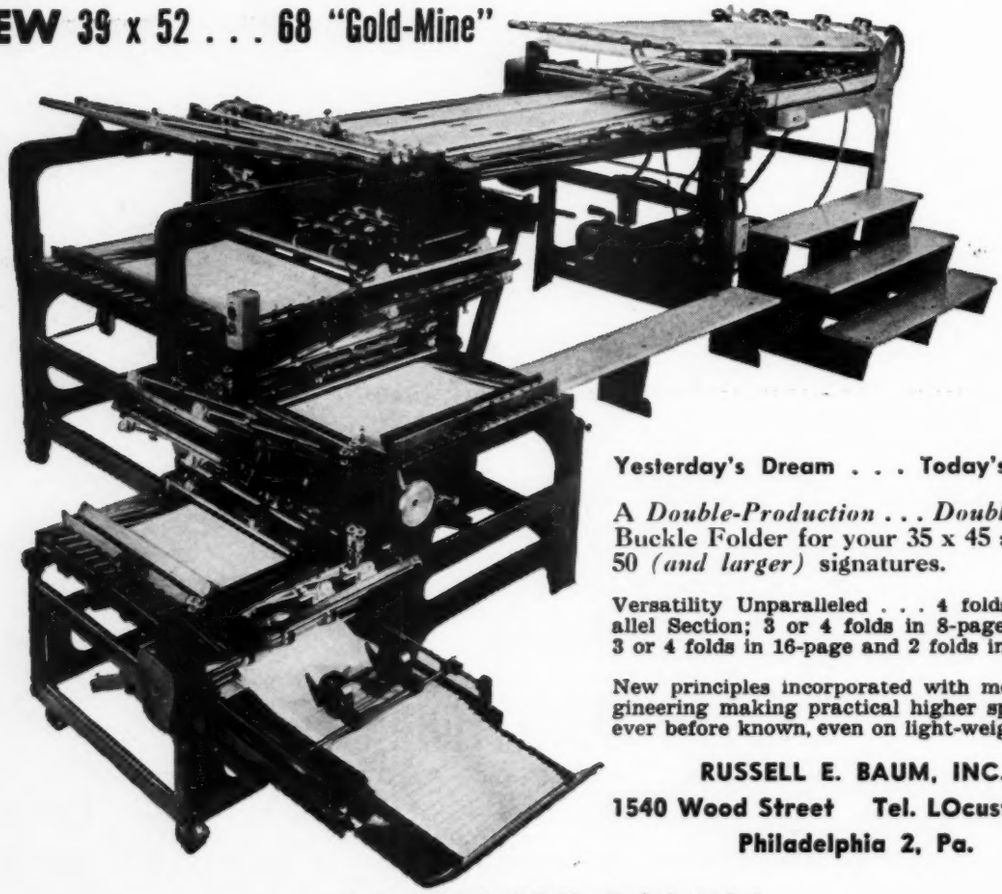
Standard Register Promotes Five—Earl Stewart has been named chief engineer for Standard Register Co., it was reported by K. P. Morse, executive vice president and general manager. Stewart will be responsible for the Engineering and Research Div. at the Dayton, O. plant. Also announced was the appointment of John Schmidt as manager of the Mechanical Products Mfg. Div. Clem E. Ruhl was promoted to the post of manager of the newly formed Central Division and William Fox will head the Atlantic Division. Wilbur Alexander has been named superintendent of the Oakland, Calif. plant, Pacific Division.

Huber Names District Salesman—John Thompson has been named a salesman for the central district of the Ink Division, J. M. Huber Corp., according to J. S. Hart, vice president. Thompson will make his headquarters in Chicago.

Enlarged C-H Marketing Organization—Cutler-Hammer, Incorporated has increased the number of district sales offices from 17 to 22 and has established five regional sales districts, according to F. A. Wright, general sales manager. The following branch offices have moved

(*Continued on Page* 16)

NEW 39 x 52 . . . 68 "Gold-Mine"



Yesterday's Dream . . . Today's Reality

A *Double-Production . . . Double Profit* Buckle Folder for your 35 x 45 and 38 x 50 *(and larger)* signatures.

Versatility Unparalleled . . . 4 folds in Parallel Section; 3 or 4 folds in 8-page Section; 3 or 4 folds in 16-page and 2 folds in 32-page.

New principles incorporated with modern engineering making practical higher speed than ever before known, even on light-weight stock.

RUSSELL E. BAUM, INC.
1540 Wood Street Tel. LOcust 8-4470
Philadelphia 2, Pa.

For More Information Circle 18 on Reader Service Card

For More Information Circle 83 on Reader Service Card→

WANT THE PRODUCT TO SPARKLE?...USE

This brighter, whiter Hammermill Opaque lends added brilliance to everything you print... helps you display products with a flourish. Colors sparkle against its exciting white background. Black and white illustrations get crisp contrast, too. Turn the page to see.

HAMMERMILL OPAQUE

COLOR OR BLACK AND WHITE Solids, tones—colors or black and white—all come out clear as a bell on new white Hammermill Opaque. Look at the whiteness. This brilliance breathes life into your printing. You can get the brighter whiteness of new Hammermill Opaque in English, Pearl, Laurel, and Vellum finishes, in a wide variety of substance weights. This specimen printed by offset on substance 70, English finish on a 42x58 two-color press. Sheet size 39x51, 16 up. Speed 3,000 an hour.

HAMMERMILL OPAQUE

MANUFACTURED BY HAMMERMILL PAPER COMPANY, ERIE, PENNSYLVANIA

Photo, courtesy H. N. White Company

it's not true...

★ That Sheridan bindery machines are built to suit the requirements of only the largest edition, publication or trade binders.

★ Nor is it true that the cost of Sheridan equipment places it beyond the reach of the smaller bindery.

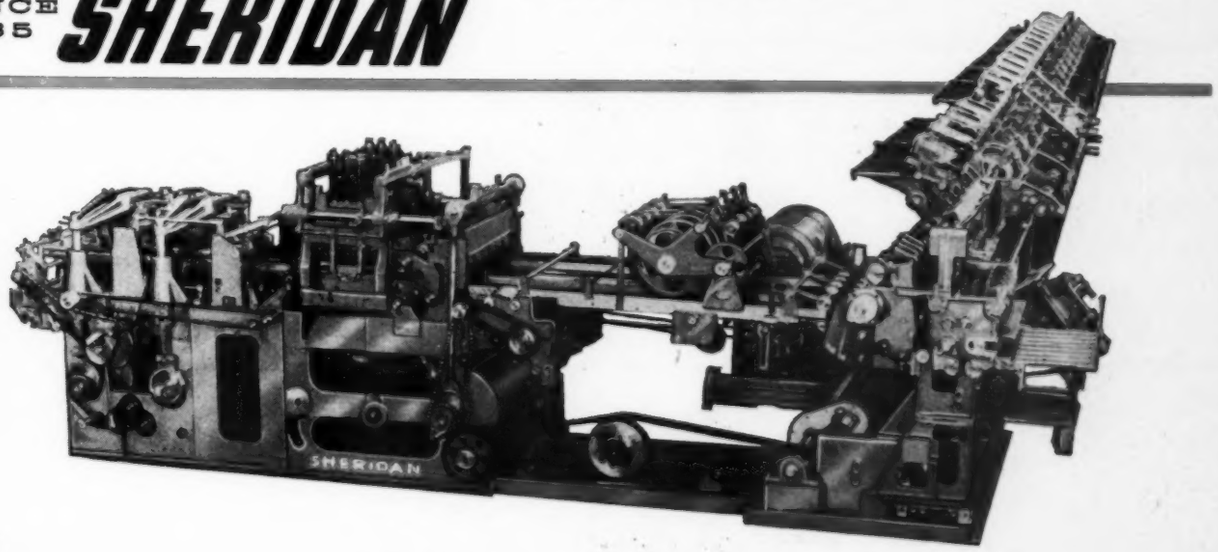
THE TRUTH IS ...

★ That Sheridan machines are built to satisfy the needs of all binderies, small or large, short run or long. The Sheridan automatic saddle binding equipment, for example, is available in a wide variety of combinations and sizes based on continuing industry-wide studies of bindery equipment and requirements.

★ Sheridan automatic saddle binding equipment is priced right in comparison with any other similar machinery available . . . and only Sheridan offers the added values of high hourly production for lowest cost/thousand, of a heavy-duty stitcher for higher product quality and lower operating costs, of quick-set adjustments for minimum change-over time that make short runs practicable and profitable.

So . . . before you purchase any equipment, call in your Sheridan representative. Get all the facts. Let him show you the right Sheridan combination for your needs . . . the way to increase profits. The T. W. & C. B. Sheridan Co., 220 Church Street, New York 13, New York.

SINCE 1835 **SHERIDAN**



For More Information Circle 157 on Reader Service Card

News Items

(Continued from Page 12)

to district office status with the former branch manager becoming district manager: Baltimore, R. A. Blue, manager; Indianapolis, Ind., J. H. Sauer, manager; Kansas City, Mo., T. R. Christian, manager; Minneapolis, Minn., C. A. Russ, manager, and Newark, N. J., W. M. Reese, manager.

The 22 sales districts have been divided into Eastern, Central, Southern, Midwestern and Western regions. J. P. Simon has been appointed Eastern regional sales manager and is succeeded as Philadelphia district manager by S. S. Blackmore. The Central region is headed by O. P. Proudfoot, who is replaced as Cleveland district manager by E. E. Durham. E. A. Clark has been named Southern regional sales manager and is followed as Dallas, Tex., manager by W. J. Phillips. The Midwestern region is headed by R. A. Haworth. R. L. Hibbard succeeds Haworth as Chicago manager and R. D. Hurd replaces Hibbard as Buffalo, N. Y. district manager. R. C. Seibert becomes Southern regional sales manager and is succeeded as Los Angeles district manager by W. H. Palin.

Interchemical Appointments—Fred A. Weymouth has been appointed vice president of Interchemical Corporation. He is succeeded as vice president of the Printing Ink Div. by Victor J. Porth, jr. Harvey Muller replaces Porth as manager of IPI's Elizabeth, N. J. factory and Robert E. Nigman succeeds Muller as IPI factory manager at Battle Creek, Mich.

WEYMOUTH PORTH MULLER

N. Y. and Penn Names Agent—Baldwin Paper Co. Inc., has been made a stocking agent in New York City for New York & Pennsylvania Co.'s offset grade, Penn/Brite, according to Marshal M. H. Dana, New York and Penn's director of marketing.

M-G-D Product Manager — Thomas E. Redstone has been appointed manager of product planning for Dexter Company, Lawson Company, and Filmsort Company, all divisions of Miehle-Goss-Dexter, Inc. Redstone will be located at M-G-D offices in Pearl River, N. Y.

REDSTONE COSTELLO

Boston Globe Promotions—Frederick C. Costello has been appointed composing room superintendent for the Boston *Globe*. He succeeds Francis X. Rooney who retired after 44 years. John J. McCabe follows Costello as assistant composing room superintendent. Also announced was the promotion of John J. MacRury from assistant ad room foreman to foreman. Leon Woods was named assistant night foreman and Joseph Callahan was given the post of assistant day ad room foreman.

Lawson Opens Western Offices—Lawson Company, Div. Miehle-Goss-Dexter, Inc., has set up its own Western sales and service territories with offices in San Francisco, Los Angeles, Seattle, Wash., and Denver, Colo. According to Carlton Mellick, director of sales, dealer arrange-

(*Continued on Page 22*)

LESSON NO. 1
HEIDELBERG = PROFIT
Profit
Production
Don't you get in the "profit squeeze." Reduce costs by installing Heidelbergs. Get added profit with Original Heidelberg modern precision letterpress. Request a demonstration of our platen and cylinder presses today.
ORIGINAL HEIDELBERG
Distributors:
Heidelberg Eastern, Inc., Glendale, L. I., N. Y.
Heidelberg Western Sales Co., Los Angeles, Calif.
Heidelberg Southern Sales Co., Houston, Texas

For More Information Circle 243 on Reader Service Card

For More Information Circle 96 on Reader Service Card

LOOK TO THIS LABEL FOR

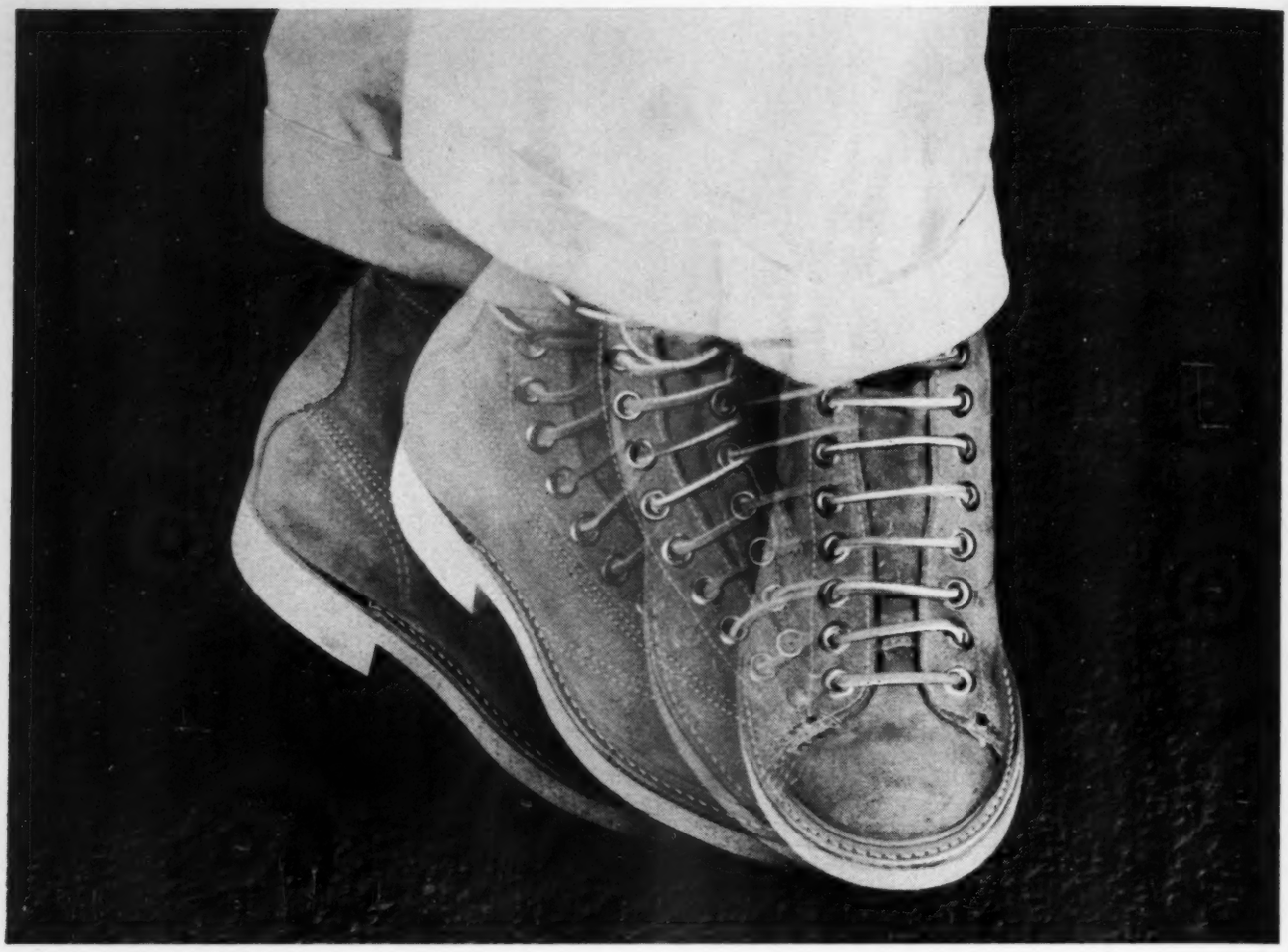
WITH

Now you can offer top-quality letterpress color printing with a minimum ink inventory! Speed King's 18 popular colors and black are all you need for nine out of ten jobs, yet they intermix perfectly when the customer demands a special color. Your nearest IPI branch has Speed King in handy 1 and 5 lb. cans . . . ready to do your presses proud!

IPI, IC and Speed King are trademarks of Interchemical Corporation

CORPORATION DIVISION

EXECUTIVE OFFICES 67 WEST 44th STREET, NEW YORK 36, N. Y.



no slip...no slide...no skid ...with A.W. ALGRIP abrasive flooring

Be sure of safe footing at the hazardous places in your plant. You know where they are . . . wherever slipping, sliding and skidding occur. Now your slippery spots can be your safest spots . . . with A. W. ALGRIP flooring.

Here's a rolled steel floor plate that's made by an Alan Wood patented process in which an abrasive is embedded to a controlled depth . . . becoming an integral part of the steel plate, to give you lasting safety.

A. W. ALGRIP can be used as independent flooring . . . or as flooring overlay. Put your plant on a safe footing, with A. W. ALGRIP . . . Approved for Safety by Underwriters' Laboratories. Write for Bulletin AL-N5

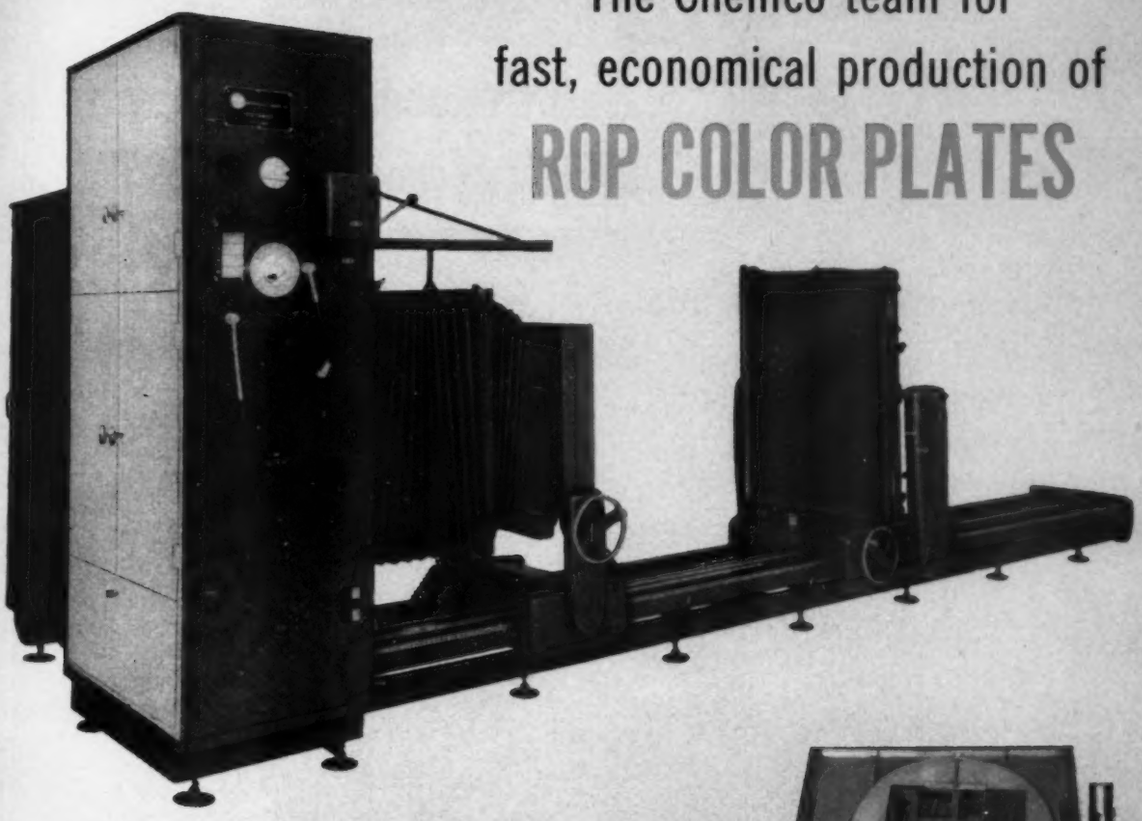
ALAN WOOD STEEL COMPANY

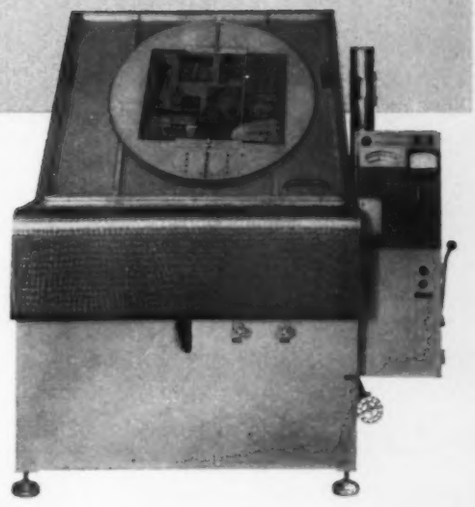
CONSHOHOCKEN, PA.

DISTRICT OFFICES: Philadelphia • New York • Los Angeles • REPRESENTATIVES: Atlanta • Boston • Buffalo Cincinnati • Cleveland • Detroit • Houston • Pittsburgh • Richmond • St. Paul • San Francisco • Seattle Montreal, Toronto and Vancouver, Canada—A. C. Leslie & Co., Ltd.

For More Information Circle 4 on Reader Service Card

The Chemco team for fast, economical production of ROP COLOR PLATES





CHEMCO OLYMPIAN ROLL FILM CAMERA– this unique and versatile camera combines the speed and economy of roll film operation with the precision and accuracy necessary for fine newspaper ROP color work. The Chemco Olympian camera holds four rolls of film up to 30" wide and features a 31½" circular screen, horizontal and vertical lens board movement and an oscillating transparency holder. A new three point register system assures perfect register of the most delicate color work.

DOW-CHEMCO POWDERLESS ETCHING MACHINE– Chemco is the original manufacturer of powderless etching machines under license by the Dow Chemical Company. The Dow-Chemco powderless etching machine has proven ideal for producing newspaper line, halftone and combination engravings on zinc and magnesium by fast, high quality powderless etching methods. Backed by Chemco's helpful service, the Dow-Chemco is the finest etcher developed for the powderless etching process.

Chemco is the ideal source for all your ROP color platemaking requirements. Our 34 years of experience, devoted solely to the needs of photomechanical reproduction, provides a unique background covering all phases—equipment, film and chemicals. You can rely on Chemco for the establishment and maintenance of a practical and efficient ROP color platemaking operation.

chemco

CHEMCO PHOTOPRODUCTS CO., INC.

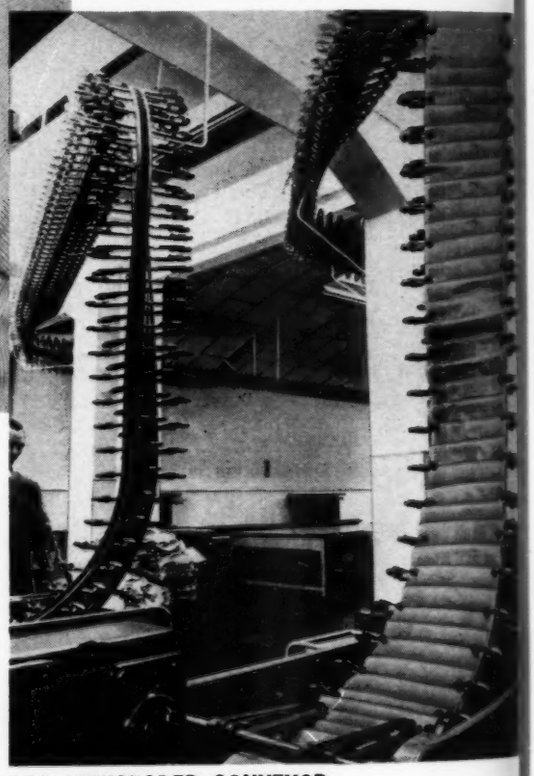
Main Office and Plant—Glen Cove, N. Y.

Atlanta Boston Chicago Dallas
Detroit New Orleans New York

For More Information Circle 40 on Reader Service Card

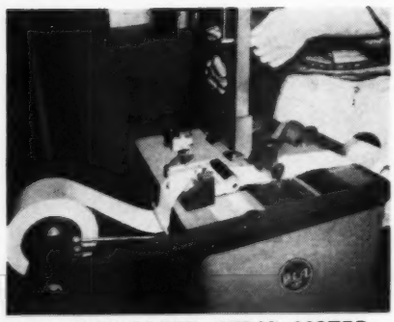
...introducing a new era of high-speed efficiency and economy!...

New Electro-Typesetters . . . Transistorized Newspaper Counting Systems... highly flexible Newspaper Conveyors . . . high-speed Strip Lister . . . Tape Combiner and Editor. These are the first RCA products offered for graphic arts automation. RCA engineering skills and specialized experience in electronics are now being applied to help provide automatic control in many phases of printing production—from the composing room to the mail room. Goals of this program are new and improved products, eventuating in integrated systems for complete control by electronic programming. Your inquiries are invited.



RCA NEWSPAPER COUNTING SYSTEM

- Counts and totalizes saleable newspapers from all press deliveries.
- Gives pressroom and mail room accurate count.
- Permits control of output—eliminates reorders and overruns.
- Totalizer is preset for total number of required papers—signals when total is reached.
- Relieves mark-up man of checking individual press counters to maintain running total of deliveries.
- Provides logical starting point toward complete automation of mail room.
- Handles any thickness newspaper from 16 to 128 pages.
- Transistorized design with plug-in modules offers long, trouble-free service.



RCA HIGH-SPEED STRIP LISTER

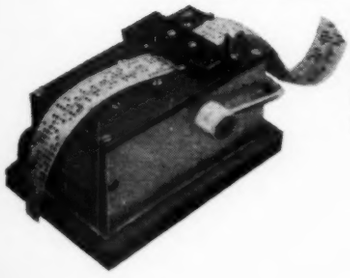
- Addresses up to 24,000 names per hour from standard 2⅝" stencils.
- Compact—only occupies about same space as a water cooler.
- Easy to operate.
- Requires little attention.
- Fail-safe mechanism stops machine if stencil jams.

RCA NEWSPAPER CONVEYOR

- Newest, most efficient conveyor for carrying press deliveries to mail room.
- Completely flexible—twists or turns horizontally or vertically to suit any layout.
- Handles any thickness up to 128 pages.
- Positive clamping action provides slip-free operation.
- Will not smudge wet ink.
- Lightweight, heavy-duty construction.
- Simpler and less costly to install.

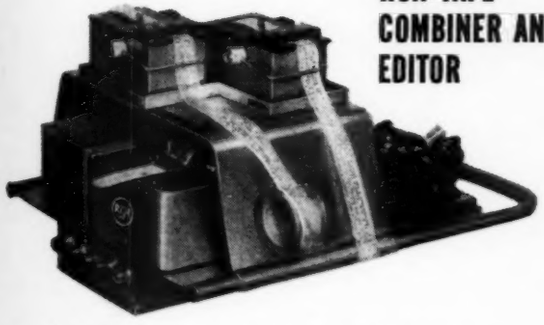
RCA ELECTRO-TYPESETTER SYSTEM

- High-speed automatic typesetting from perforated tapes.
- Performance-proved through 5 years' operation at Wall Street Journal plants.
- Permits setting type at speeds up to 540 characters per minute.
- Operates linecasting machines at full capacity—fewer machines do more work.
- Results in better scheduling of workloads.
- Allows later deadlines for fast-breaking news.
- Handles all six unit code tapes.
- Self-check devices locate trouble source instantly—permit quick correction.
- Easy to install and service.



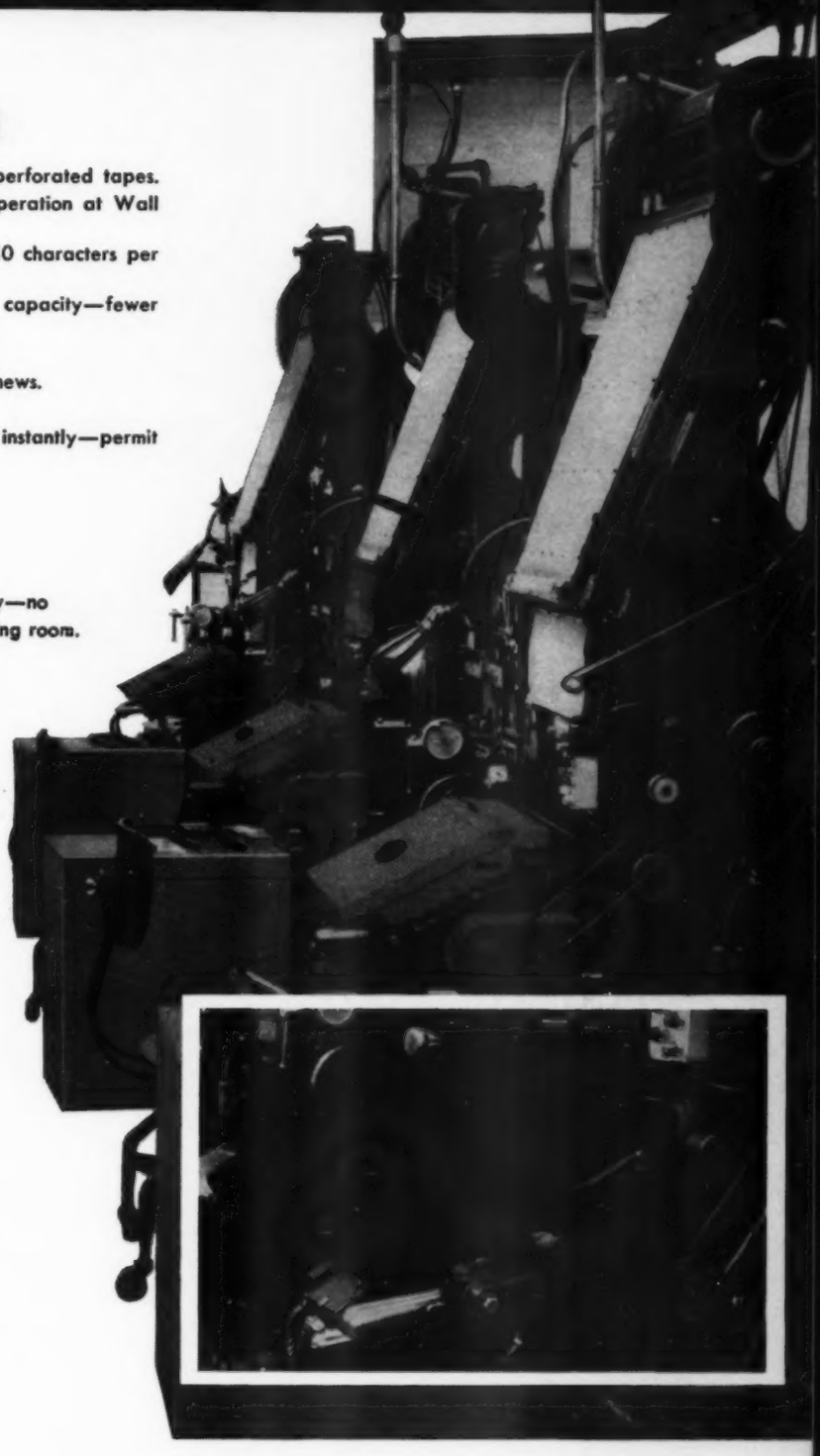
TAPE READER

May be located remotely—no tape required in composing room.



RCA TAPE COMBINER AND EDITOR

- Ideal accessory for automatic typesetting systems.
- Combines information from two tapes, producing from them a single combined tape.
- Permits adding to or changing perforated tape copy.
- Perfect for stock and bond exchange reports.



RCA Tmk(s) ®

RADIO CORPORATION of AMERICA

INDUSTRIAL AND AUTOMATION DIVISION
DETROIT, MICHIGAN

Mail coupon below for further facts

Radio Corporation of America, Dept. P-343
12605 Arnold Avenue, Detroit 39, Mich.

I am interested in your equipment for_____

NAME_____ TITLE_____

COMPANY_____

ADDRESS_____

CITY_____ ZONE_____ STATE_____

☐ Have RCA representative call.

News Items

(Continued from Page 16)

ments previously in effect have been discontinued.

Glenn E. Backman is the San Francisco representative. His office is located at 235 Ninth St. The Los Angeles representative is N. H. Turner, with offices at 1335 Maple Ave. R. D. Hardy will be responsible for the Northwest territory. Hardy will be headquartered at 314 Lloyd Bldg., Seattle. M. A. Thompson is the new representative in Denver, with offices at 1918 Lawrence St. The four offices also will carry a complete line of Dexter bindery equipment, and the Seattle and Denver offices will handle the Miehle press line as well.

New York Companies Merge—Fountain Die Cutting Co. recently merged with Freedman Cut-Outs, Inc., it was announced by William B. Freedman, president. Fountain will retain its name, and will move its operations to the Freedman plant at 34 Hubert St., New York, N. Y.

Newspaper Week Chairman—G. Richard Dew, general manager, Pennsylvania Newspaper Publishers' Assoc., has been named chairman of the 1959 National Newspaper Week Committee. The appointment was announced by William A. Bray, president, Newspaper Assoc. Managers, Inc., annual sponsors of the event. This year's NNW, marking the 20th annual observance, is scheduled for Oct. 15-22.

Joins Keller Staff—Hank Wiener has been appointed to the staff of George R. Keller, Inc. Wiener has more than 20 years experience in the Graphic Arts industry and is reported to be an authority on graphic lighting and service techniques.

WIENER

FORD

Ford Joins Star Parts—Rodney M. Ford has been named to the staff of Quido E. Herman, West Coast representative of Star Parts Inc. His duties will include providing more frequent calls on customers in this territory.

Doyle Passes—Charles C. Doyle, president, J. E. Doyle Co. died Jan. 5 in Cleveland Clinic Hospital. During his career, he had obtained 75 patents on improvements and equipment for printing. His major contributions include improvements in paper vacuum cleaning equipment and infrared drying equipment. Doyle also developed an anti-static solution to neutralize the static which makes printing sheets and other surfaces adhere to each other. He is survived by his wife, two daughters, and two sons, James E. who is an engineer for Dexter Company, and Donald J., vice president of J. E. Doyle Co.

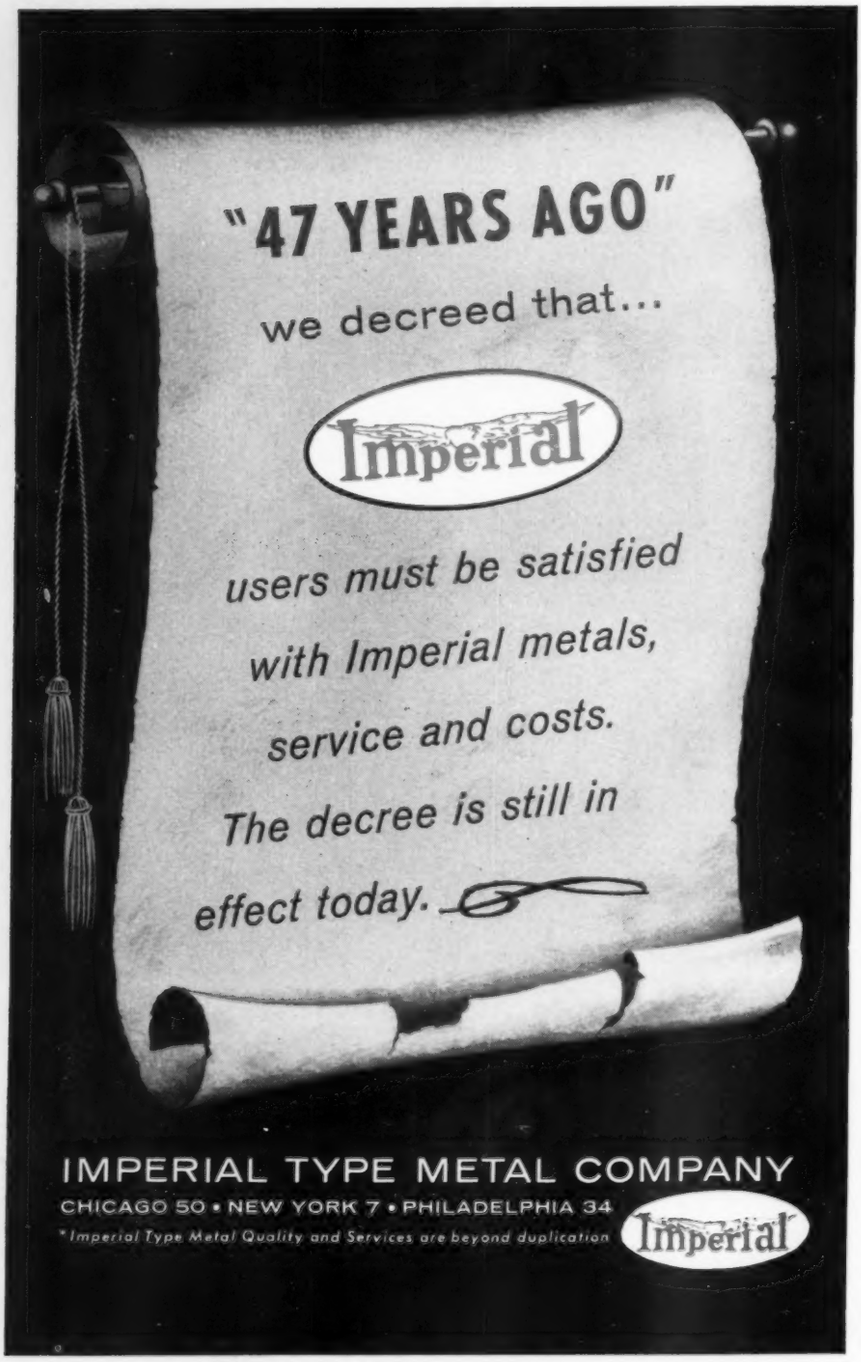
Illinois Representative—Andrew G. Murray has been appointed to represent Miller Printing Machinery Co. in the Chicago and northern Illinois area. He will make his offices at the Miller branch at 400 W. Madison St., Chicago.

MURRAY

JONES

Herrick Ink Representative — Edmund Jones has been named to represent the Herrick Ink Co. in Virginia and North and South Carolina. His headquarters will be at 1505 Sherwood Ave., N. W., Roanoke, Va.

(*Continued on Page 78*)



For More Information Circle 93 on Reader Service Card

Quality Printing demands PRECISION MANUFACTURE

This Bullard model 75 HBM is boring holes in a pair of folder side frames to a tolerance of ±.0004 inch! Such Hantscho precision means printing precision and quality in every Hantscho product.

...and in the Hantscho factory *precision* is every day standard practice!

For example, all shaft and bearing holes of printing and folding units are bored on a modern automatic positioning boring mill, a production machine accurate to within .0004 inch, recently installed in our Mount Vernon factory. Just like the printer who purchases the best press available to cut costs and increase production, we too have installed the finest machine tools to enable us to decrease spoilage, cut manufacturing costs and give our customers the best possible press at the lowest possible price.

This investment in modern, precision production machinery is reflected in the quality of every Hantscho press . . . in trouble-free operation . . . and in the high quality of work produced on Hantscho web offset presses.

Ask your Hantscho representative to point out all the quality building and precision features of Hantscho presses. Compare it with any other press . . . you'll agree that Hantscho offers more value for your equipment dollar.

GEORGE Hantscho CO., INC.

602 SOUTH 3RD AVENUE, MOUNT VERNON, N.Y.
TELETYPE: TWX-MT V NY 2193
MIDWEST REPRESENTATIVES: 153 W. HURON ST., CHICAGO 10, ILL.

For More Information Circle 81 on Reader Service Card

HELPFUL LITERATURE

FOLDERS · Sales Aids · Instruction Sheets · BULLETINS · Catalogs · BOOKLETS · Brochures

Circle Numbers on Reader Service Card in This Issue

Keep Yourself Informed. The folders and bulletins listed below all pertain to modern equipment, supplies, processes and/or methods. These have been prepared especially for plant managers, superintendents and foremen. Please circle the numbers on the Reader Service Card in this issue for the bulletins you wish to receive. Drop the self-addressed card in the mail. PRINTING PRODUCTION will forward your request.

Composing Room

FISK ALIGN-A-MAT

Descriptive literature is available regarding the Fisk Align-A-Mat for re-aligning Linotype and Intertype matrices. Distributor stops due to lugs worn short will also be eliminated, states Fisk. Circle No. 309 on Reader Service Card.

LINE UP AND REGISTER TABLE

Jos. Gelb Company has issued a two page bulletin regarding its Monoruler line up and register table and the Synchro-Set ruling carriage. The 31 in. sq. table is furnished with a single horizontal straight edge for both horizontal and vertical markings. Circle No. 322 on Reader Service Card.

LINOTYPE NEWSPAPER FACES

A folder entitled *Linotype Newspaper Body Faces* is available from Mergenthaler Linotype Co. Faces are arranged in accordian folders for easy comparison, and run from 7½ pt. through 9 pt. sizes. The duplexed face, bold, italic, etc., is also presented. Alphabet lengths of the various specimens are shown. Circle No. 307 on Reader Service Card.

STEEL AND ALUMINUM CHASES

American Steel Chase Co. has prepared a catalog concerning its line of steel and aluminum chases for newspapers, commercial printers, stereotypers, and electrotypers. Circle No. 315 on Reader Service Card.

ROYAL NEWSPAPER TEXT FACE

Full page specimens are available of Intertype Company's new Royal newspaper text face. Royal is offered in 8 pt., 8½ pt., and 9 pt. sizes with bold in both regular and tape operated versions. Circle No. 325 on Reader Service Card.

MATRIX CONTRAST BOOKLET

A booklet that explains how Matrix Contrast service can speed up composing room production by eliminating wrong font errors is being offered by Matrix Contrast Corp. Circle No. 311 on Reader Service Card.

LUDLOW SCRIPT FACES

Specimen sheets of eight script faces are available from Ludlow Typograph Co. Included in the faces are Formal Script, Florentine Cursive, Coronet Light, Coronet Bold, Mayfair Cursive, Admiral Script, Mandate, and Hauser Script. Circle No. 317 on Reader Service Card.

Platemaking

GRAY CONTACT SCREEN

A folder and price list on the Universal gray contact screen has been released by Caprock Developments. Screen is reported to shoot fast, and provide good contrast and tone values. It is available in sizes 8 in. by 10 in. to 23 in. by 29 in. Circle No. 312 on Reader Service Card.

CAMERA LUCIKON

M. P. Goodkin Co. has released a four page bulletin concerning the Model B Camera Lucikon. Included in the features are: four sided hood which permits use in well lighted room; 24 in. by 24 in. viewing area on focal plate, and calibrated dials. Specifications are given in the bulletin. Circle No. 331 on Reader Service Card.

CRONAR ORTHO A LITHO FILM

Technical data on Cronar Ortho A Litho film and its applications is available from E. I. du Pont de Nemours & Co. in a six page folder. Graphs are used to show the relative effect of temperature and humidity on glass, Cronar polyester photographic film base, vinyl or polystyrene, and tri-acetate. Processing data for Cronar Ortho A film is included. Circle No. 323 on Reader Service Card.

BRIGHTYPE SAMPLES

Samples of the Brightype photographic process for direct conversion of any letterpress form to film or photo paper are offered by Brightype Service. Brightype products include right reading positives or negatives, wrong reading positives or negatives, and right or wrong reading paper prints. Circle No. 324 on Reader Service Card.

ROUSE POWER MITERER

The Rouse power miterer, claimed to enable 800 miters in 45 min., is described in a catalog prepared by H. B. Rouse & Co. Information about Rouse's lead and rule cutters, composing sticks, type gauges, band saws, and other equipment is given. Circle No. 318 on Reader Service Card.

CHEMCO POWERDOT STRIPFILM

Recommended procedures and handling for Chemco Powerdot stripfilm are contained in a folder offered by Chemco Photoproducts Co. Powerdot stripfilm is available in 12 cut sheet sizes and 9 roll sizes. Circle No. 308 on Reader Service Card.

Pressroom

RAISED PRINTING PRESS

The Virkotype Model V-12 automatic raised printing press equipped with 5 ft. cooler is the subject of Folder No. 28 released by Virkotype Corporation. Compounds and inks for raised printing are also discussed. Circle No. 316 on Reader Service Card.

DOYLE SHEET CLEANERS

Doyle sheet cleaners, claimed to provide good printing without stops for unnecessary washups, are discussed in a bulletin offered by J. E. Doyle Co. Circle No. 310 on Reader Service Card.

HAND FED LETTERPRESS

The Linopress hand fed letterpress is the subject of a four page illustrated folder prepared by Deskfinder Company. Press slips a succession of line slugs into printing position one at a time, a different slug at each impression. Circle No. 332 on Reader Service Card.

ECONOMICS OF WEB PRINTING

The economics of web printing is the subject of ATF's *Web-Fed vs. Sheet Fed* booklet, recently published by American Type Founders. A comparison of web offset printing costs with sheet fed costs (letterpress and offset) is given. Circle No. 319 on Reader Service Card.

STAR V-BELT MOTOR DRIVE

Star Parts Inc.'s V-belt motor drive for Linotype and Intertype machines is illustrated and described in a new booklet. Drive is said to embody several features including variable speed pulley, sealed ball bearing idler pulley, and vibration free operation. Circle No. 320 on Reader Service Card.

IDEAL LITHOGRAPHIC ROLLER

Ideal Roller & Manufacturing Co. is offering an attractive two color folder to explain the characteristics of its Tantone lithographic roller. Features of the synthetic roller are said to include: resistance to the action of solvents, ink stability up to 3 hrs., and life expectancy up to 7 yrs. Circle No. 330 on Reader Service Card.

INVINCIBLE VACUUM CLEANERS

Invincible vacuum units for cleaning newsprint particles and dust from newspaper folders are described in a booklet offered by Invincible Vacuum Cleaner Mfg. Co. Cleaners, which are said to clean a folder in 45 min., handle liquid and solid materials. Circle No. 313 on Reader Service Card.

BLANKET AND DRAWSHEET CATALOG

A catalogue of Tingue blanket and drawsheet samples for all types of press operations has been prepared by Tingue, Brown & Co. Tingue contact two piece top blankets, reported to enable reduced offset and less ink accumulation, are decribed. Circle No. 314 on Reader Service Card.

Miscellaneous

PAPER SAMPLE KIT

Riegel Paper Corp. is distributing a portfolio to demonstrate the printing characteristics of its four new Carolina merchant grades, White Tag, Manila Tag, Vellum Bristol, and White

Index. Included in the portfolio are 11 samples of printing of the stock, and a sample book of each grade. Circle No. 306 on Reader Service Card.

DREISSIG BRONZING MACHINES

Technical data and descriptions of various models of Dreissig bronzing machines are presented in an attractive folder issued by Henry P. Korn. Illustrations and specifications are presented. Circle No. 328 on Reader Service Card.

CROSFIELD AUTOMATIC CONTROLS

An attractive 26 page booklet, generously supplied with illustrations and diagrams, has been released by Crosfield Electronics, Inc. to describe its automatic controls. Included in Crosfield equipment are: automatic controls for color register on rotary presses; automatic register controls for pre-printed webs, and electronic correction of color separations. Circle No. 333 on Reader Service Card.

Hartford Times selects **GOSS HEADLINERS** for color flexibility and growth

The Hartford (Conn.) Times has selected Goss, thus joining the more than one hundred metropolitan dailies across the country which now depend on Headliner presses.

Why do so many publishers select Goss Headliners over other equipment? The reason is established performance... leadership in the designing and building of newspaper equipment which will meet present *and future* requirements.

The Hartford Times installation will include many features *—pioneered and perfected by Goss—*for progressive publishers who plan ahead and want equipment engineered with such thinking in mind. The ten new Headliner units with two 112 page Uniflow folders will be equipped with Tension Plate Lockup, fingertip Colortrol and Continuous Ink Feed, two color halfdeck printing couples and Goss Reels-Tensions-Pasters complete with automatic Paster Pilots.

When planning your next expansion move...study the many advantages of Gosscolor for printing spot color and full ROP Color...carefully consider Goss Headliner presses. They're built to meet your operational requirements now and will enable you to keep pace with anticipated growth.

THE GOSS COMPANY
A Division of Miehle-Goss-Dexter, Inc.
5601 WEST 31ST STREET, CHICAGO 50, ILLINOIS

Whatever Your Run
GOSS Has the Press HEADLINER...UNIVERSAL...UNITUBE...DEK-A-TUBE...COX-O-TYPE

For More Information Circle 72 on Reader Service Card

50% MORE FORM ROLLER AREA ON THE MIEHLE 25 OFFSET

With 50% more form roller area, the Miehle 25 is unmatched in its size for inking coverage and smooth, even distribution...factors which naturally mean finest quality.

Large form rollers of different diameters give the flexibility to run just about anything on the 25... heavy coverage forms...full 19 x 25″ solids. No matter what the job you're always sure of consistent color fidelity.

And see how easy it is to maintain quality control. Inking and dampening roller adjustments are *outside the press*...can be set *while running*. No valuable production time is lost.

See the 25 Offset perform. See its many "big press" quality features... pull-type side guides, true rolling cylinders, swing gripper sheet transfer, and many more. See for yourself why so many printers are installing the Miehle 25 to do a wider range of work.

Call or write for complete information today!

THE MIEHLE COMPANY
A DIVISION OF MIEHLE-GOSS-DEXTER, INC.
CHICAGO 8, ILLINOIS

Investigate all three Miehle Job Offset Presses: The **25**...19½ x 25″—7500/hr./The **29**...23 x 29″—7000/hr./The **36**...23 x 36″—6500/hr.

For More Information Circle 117 on Reader Service Card

PRINTING PRODUCTION

FEBRUARY 1959

Daily Production Information Helps Letterpress-Offset Printer

DETERMINE PLANT COSTS

By JAMES N. APOTSOS, *A. S. Gilman, Inc., Cleveland*

HOW many printing plant managers know what it costs to operate a given press? Or a folding machine? Or, for that matter, the cost of any given composing room operation? How can you be sure you are recovering *all* your costs when you submit a job bid?

These questions can be answered, but it takes a well organized system to accomplish it. It is called a cost finding system which we have found offers innumerable benefits.

First, let us define the primary purpose of such a system. It is intended to determine by consistent methods, says Printing Industry of America, the productive hour cost for each important manufacturing operation in a printing plant.

Such methods will indicate what the hour costs are under varying conditions and at different levels of activity. When these costs are obtained over a reasonable period of time, the average productive hour cost of each operation may be determined.

The average hour cost, sometimes called normal cost, is an important factor in predetermining the cost and selling price of a given piece of work. But this is by no means the only purpose of a cost system, and in some respects it is not even the most important one. Properly considered, states PIA, the cost finding system is a tool of management which may be used for analysis of the efficiency of almost every operation.

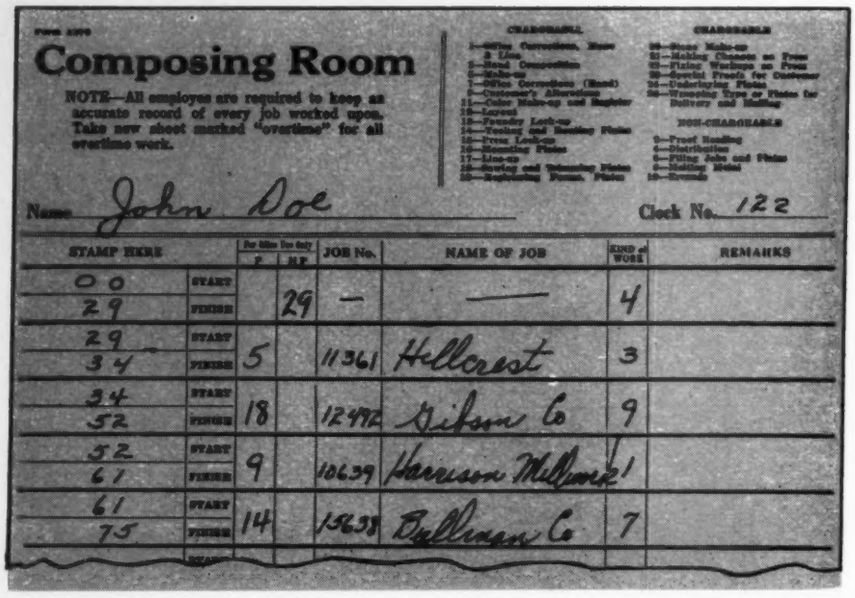
Some printing companies use no system at all, but seek to charge work done on a basis that is little better than guess work. It is true that the repeated failures of such organizations are traceable directly to their lack of knowledge in this important area.

The tragedy of such insolvencies unhappily is not confined to those directly concerned. According to PIA, because the managers of such plants do not know their cost, they often sell at a loss. This results not merely in their own failure, but in depriving other printers, who do know their costs, of business upon which they could make a profit. Thus, the ignorance of this system hurts not only the individual company, but the industry and the whole economy as well.

A Two-Process Plant

One year ago, my company, A. S. Gilman, Inc., of Cleveland, placed into operation such a cost finding system. We have obtained innumerable benefits from this new addition to our company operations. How we got into such an opera-

Huddling on plant costs at A. S. Gilman, Inc., Cleveland, are, left to right: James Apotsos, author of this article; Thomas G. Roberts, vice president, and R. G. Merrick, vice president and general manager.



Composing Room

NOTE—All employes are required to keep an accurate record of every job worked upon. Take new sheet marked "overtime" for all overtime work.

Name John Doe — Clock No. 122

STAMP HERE		P	NP	JOB No.	NAME OF JOB	END of WORK	REMARKS
00	START						
29	FINISH		29	—	—	4	
29	START						
34	FINISH	5		11361	Hillcrest	3	
34	START						
52	FINISH	18		12472	Gibson Co	9	
52	START						
61	FINISH	9		10639	Harrison Millwork	1	
61	START						
75	FINISH	14		15638	Ballman Co	7	

Fig. 1—Daily operation time sheet on which the individual worker records time worked on each operation. This particular form is used in the composing room. Similar forms with different chargeable and non-chargeable operations listed are used in each department. Form measures 7¼ in. by 11 in.

tion, how it works, and the necessary parts of the system will be related here.

Gilman's is a combination letterpress-offset commercial printing company which handles an annual volume in excess of $1 million. Complete manufacturing services are offered from artwork to finished product. Approximately 100 workers are employed throughout the operation.

Our cost finding system was established with the assistance of Printing Industry of Cleveland, an affiliate of Printing Industry of America. PIC provides continuous advice in completing the pre-printed forms which are necessary to the maintenance of the system. These include forms furnished by PIA as well as ones we have designed for our specific purpose.

We have divided our plant into departments or operational areas, each representing a natural function or operation. For example, there is hand composition, Monotype keyboard, Monotype caster, large cylinder presses, folding machines, etc. For convenient bookkeeping purposes we group as many similar operations or machines together under one heading. For example, under hand composition are grouped the following operations: Hand typesetting, proofing, reproduction proofs, page makeup, lockup, underlaying of cuts, etc.

Supplies necessary in each department are charged against the cost center that uses them. In addition, all overhead expenses are allocated to the cost centers and become a part of each all-inclusive hour cost. This is the cost figure we use on estimates and for billing.

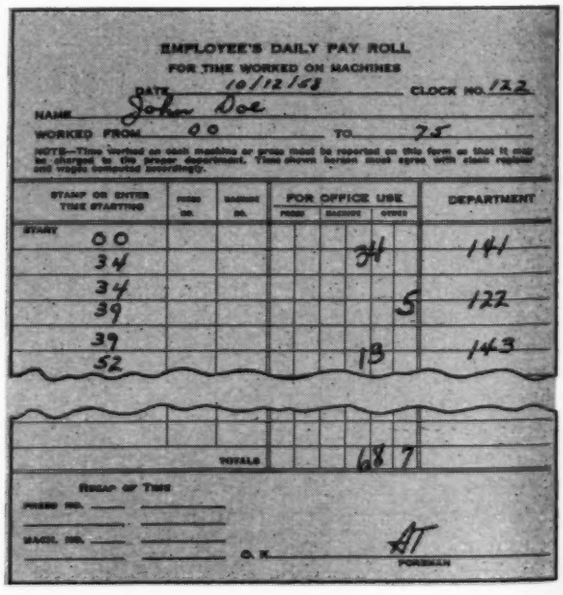
Eight Forms in System

Eight different forms are necessary to the proper functioning of our system. These include: (1) Daily Operation Time Record which was devised for use in our company only; (2) Employee Daily Pay Roll which is a revised PIA form; (3) PIA Form 16 which is a monthly record for the hand composition department; (4) PIA Form 17, a monthly record for use in all machine departments; (5) PIA Form 15, a monthly individual pay roll record; (6) PIA Form 9-H, a monthly summary of department costs; (7) Job Envelope, designed for use in the Gilman plant only; (8) Job Cost Sheet or Job Cost Tracer, one of our own forms. Many of these forms are reproduced along with this article.

The job envelope is much the same as many plants use. It contains all information pertaining to the job such as customer name, quantity, description of the job, kind and quantity of paper, color of ink, etc. Also, following the procedure of many plants, the job envelope accompanies the order as it moves through the plant.

The job cost sheet or tracer is made out at the same time as the job envelope is completed. However, it contains only the customer name, description of the job and quantity ordered. The tracer remains in the production office and on it is posted the time for that particular job daily.

Job time is obtained from the daily operation time sheets (Fig. 1) on which the individual worker writes time worked on each operation as he completes it. Each employee is furnished a time sheet (Fig. 2) which is filled out by everyone with the exception of the composing room personnel. In this department, each worker only completes the daily operation time rec-



EMPLOYEE'S DAILY PAY ROLL
FOR TIME WORKED ON MACHINES

DATE 10/12/58 CLOCK NO. 122
NAME John Doe
WORKED FROM 00 TO 75

NOTE—Time worked on each machine or press must be reported on this form so that it may be charged to the proper department. Time shown hereon must agree with clock register and wages computed accordingly.

STAMP OR ENTER TIME STARTING	FORM NO.	MACHINE NO.	FOR OFFICE USE FORM	MACHINE	OTHER	DEPARTMENT
START 00						
34				34		141
34					5	122
39						
39				13		143
52						
TOTALS				687		

RECAP OF TIME
FORM NO. ____ ____
MACH. NO. ____ ____
O. K. AT FOREMAN

Fig. 2—Pre-printed form used for showing time worked on each machine in the Gilman plant. This record serves to show who worked on what press and for how long. Form measures 5¾ in. by 8½ in. Different color paper helps to identify department using form.

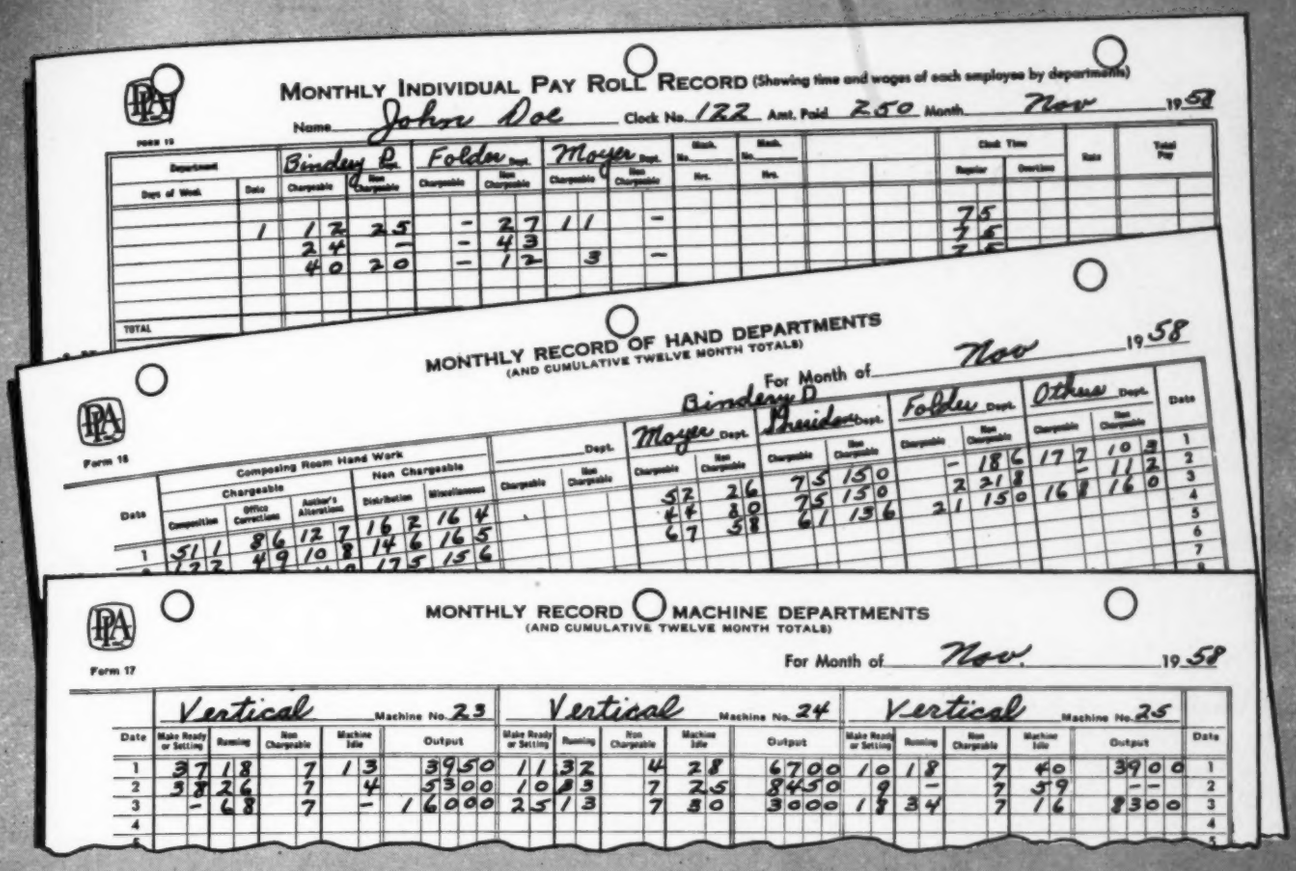

MONTHLY INDIVIDUAL PAY ROLL RECORD (Showing time and wages of each employee by departments)
Name John Doe Clock No. 122 Amt. Paid 250 Month Nov 19 58
MONTHLY RECORD OF HAND DEPARTMENTS
(AND CUMULATIVE TWELVE MONTH TOTALS)
For Month of Nov 19 58
Form 16
MONTHLY RECORD MACHINE DEPARTMENTS
(AND CUMULATIVE TWELVE MONTH TOTALS)
For Month of Nov. 19 58
Form 17
Vertical Machine No. 23
Vertical Machine No. 24
Vertical Machine No. 25

Fig. 3—Three forms prepared and copyrighted by Printing Industry of America which are used in cost finding system maintained by the Gilman company. Each is a monthly record of chargeable and non-chargeable time for individual workers, and both hand and machine departments. Each form measures 11 in. by 8½ in.

ord because he is only performing one particular operation.

The daily operation time record is printed on different color stock which makes it easier in identifying the different operations or departments. For example, white is used for composing room, green for offset, blue for one operational area of the bindery, and yellow for another operational area of that department. Presses, folders and cutters have been assigned numbers for quick identification. For example, the offset presses are referred to as 41 and 42, the Verticals are 23, 24 and 25, and the Heidelberg is 26.

Wants to Know Chargeable and Non-chargeable Time

Each department's daily time record includes a list of various operations which are identified by numbers. This list is also grouped to show which are chargeable and non-chargeable operations. A worker's time taken from the daily operation time record is listed on the job cost tracer. This form also is intended to show the time for each machine and whether this time was spent on setup, makeready, running, or is non-chargeable time.

The employees' daily pay roll form is used primarily for recording time worked on machines. We find that it saves time in checking time sheets to see who worked on what press and for how long. A color code is also used for identifying departments using this form with the exception that yellow is used for offset, white for the bindery group, and pink for the letterpress.

The cost finding system functions according to a pre-planned procedure. Each morning the daily time slips from the preceding day are collected by the foreman who checks and OKs them before they are sent to the production office. It is my job to extend the time worked on each job and operation in the chargeable and non-chargeable columns as indicated by the operation numbers on the time slips. The chargeable and non-chargeable hourly columns are then totalled. I also check to determine that the chargeable and non-chargeable hours for each worker agree between the daily operation time record and the employee daily pay roll form. The time worked by each employee is posted on PIA Form 15 (Fig. 3) which you will remember is the Monthly Individual Pay Roll Record.

Both daily time records are filed for a period of four months in the event we wish to check them. PIA Forms 16 and 17 (Fig. 3), which are the Monthly Record of Hand Departments and Monthly Record of Machine Departments respectively, are used at this point for posting chargeable and non-chargeable time taken from the daily operation time record.

Obtaining the Hourly Rate

At the conclusion of each calendar month the figures appearing on PIA Form 15 (Monthly Individual Pay Roll Record) are totalled at the bottom of each page by columns. The employee's monthly wage is then figured by multiplying the total time worked in the month by his individual hourly rate. Any over-

time worked by the employee is added in. Once the employee's total wage (gross salary and vacation pay) is established, you can use that figure and divide it by the actual number of hours worked to get the hourly pay roll rate.

When the hourly pay roll rate is established, mutiply the new hourly rate by the amount of time spent in each operation or by each press. The cost for each operation or each press worked on by the employees should equal the employees total monthly earnings for that month. Monthly records of both hand and machine departments are also totalled monthly.

Finding Each Month's Costs

Once the monthly records for hand composition department, machine departments, and individual pay roll are completed, they are sent to the offices of PIC where the monthly summary of department costs form is prepared. In addition to the above figures, Gilman's comptroller furnishes PIC information on fixed, current, general administrative and selling expenses. These figures are integrated with the hourly rates.

The monthly summary of department costs form, when completed, will provide a comparison of the all-inclusive hour costs for six months of operation with the all-inclusive hour cost for one calendar month of each cost area of the plant. It will also show for that month the average ems set, impressions per running hour, percentage of productive time by each department, total running hours, and total ems and impressions.

It is these figures which are reviewed by our top production executives—R. G. Merrick, vice president and general manager, and Thomas G. Roberts, vice president. The month's cost figures are watched and compared with the figures for the previous six months. Our chargeable hour costs are readjusted whenever necessary. Three sources of information are considered: The current monthly costs, our six months average actual costs, and PIA averages. It requires seven to ten days for PIC to complete the monthly summary departments form.

There are two other forms used by our company which have been designed for commercial printing

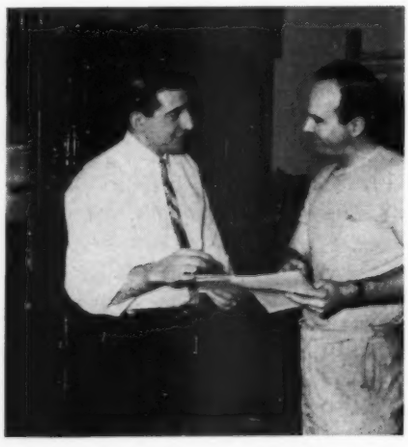
A composing room conference on cost information takes place in Gilman plant between Jim Apotsos (left), author of this article, and Bob Toth, departmental foreman.

plants by Printing Industry of America. Though these should not be considered as part of the cost finding system they do, however, afford important production data for daily, weekly and monthly studies by our production executives.

Recap of Production Data

One is called the Daily Recap of Machine Departments; the other, Daily Recap of Hand Departments. Each is intended to show the output of each machine and each department so that average output per running hour may be determined. A total of these figures provides the manager a weekly and monthly recap of the performance of these departments.

Both completed forms are submitted to the manager at the end of each day after the time reports have been summarized. This information enables him to compare



Hunting cost information in the offset pressroom of A. S. Gilman, Inc., Cleveland, is Jim Apotsos (left) of the cost department who confers with Ray Gallagher, foreman.

the performance of individuals in each department and of one department with another.

We are greatly satisfied with the results of this cost finding system. Few weak points have been detected in its operation. The greatest difficulty we had when the system was first installed was in getting the men to mark down their time on the furnished forms. One other weak point noted is the reluctance of workers to record the minor operations they perform. The first disadvantage has been overcome; the second is gradually diminishing by constantly impressing upon the workers the importance of noting every operation regardless of how insignificant.

We can now accurately answer the questions posed at the beginning of this article because we do know what our costs are in every operational area of the plant. As you see, we have applied a record keeping system to do this, but the happy part you will discover is that it takes the guesstimating out of estimating.

Teletypesetter Integration Completed by Fairchild

Completion of the integration of the Teletypesetter portion of its business from Chicago to its main plant in Plainview, L. I., N. Y. has been announced by J. A. V. Hyatt, vice president and general manager, Fairchild Graphic Equipment. The Teletypesetter portion includes the inventory and tools recently acquired with the purchase of the assets of the Teletypesetter Corporation. A school for the training of Teletypesetter maintenance personnel is now conducted at Fairchild's headquarters in Plainview, which has been expanded.

In order to expedite orders for service, parts or equipment relative to Teletypesetter operations, all inquiries should be addressed to Fairchild Graphic Equipment, Fairchild Drive, Plainview, L. I., N. Y.

IAE&S Plans Spring Meet

The annual Spring Technical Conference and Exhibition of the Intl. Assoc. of Electrotypers & Stereotypers, Inc. will be held at the Hotel Royal York, Toronto, Can., Apr. 13-14. The schedule of events will include technical sessions and plant tours.

Measuring Offset Press

PACKING

. . . LTF reports on gauges which should eliminate guesswork in litho pressrooms.

ACCURATE packing of plate and blanket is an absolute must for good presswork, says Lithographic Technical Foundation in its latest research report to the lithographic industry. Also, with the increasing use of fine-grain and grainless bimetal, deep-etch and presensitized plates, the need for accuracy has become even more critical.

Errors of only a few thousandths of an inch can greatly reduce the life of a presensitized plate and can seriously affect the quality of the printing from any grainless plate. Dot slur is a common trouble that can be caused by overpacking or an incorrect relationship of packing between the plate and blanket. Mealy, wormy looking halftones are frequently caused by underpacking. This last trouble is especially noticeable in halftone tints with connected dots. The unconnected dots print without trouble, but the heavier tints do not. The trouble is often blamed on the ink or the paper but the real cause is often underpacking.

Precision Job Is Not Easy

It's not easy to do a precise job of packing the plate and the blanket. Correct blanket thickness is especially difficult to measure. In the past, we could never be sure of the measurements because the rubber compresses, the blanket is flexible, and many pressmen use a machinist's micrometer.

The machinist's micrometer is designed for rigid metal objects. It doesn't do a satisfactory job of measuring materials that compress. Not two men, using a machinist's micrometer to measure the thickness of a blanket, apply exactly the same pressure. A ratchet helps so long as the same micrometer is used. But no two ratchet micrometers are alike.

Electric and magnetic thickness gauges such as the G.E. Thickness Gauge Type B are also available. These are accurate to about 5 to 10% of the total thickness of the material being measured and can be used to measure the thickness of some lithographic plates. On compressible and thicker materials like blankets, however, a possible error of 5 to 10% is too much to adjust blanket packing with the accuracy required.

How Much Thickness Lost?

There is still another question and this is, how much blanket thickness is lost when the blanket is stretched around the cylinder?

Accurate blanket thickness measurements became possible a few years ago with the development of the LTF Blanket Thickness Gauge. This is a specially designed bench micrometer having a weighted platen. It always exerts the same pressure on the blanket and thus gives very consistent readings.

Use of this instrument makes for much greater accuracy in measuring blanket thickness and simplifies the selection of the proper packing sheets. However, it cannot do the entire job of making sure that the plate and blanket are installed to the correct height on the press. This is especially true after the press has been run for a few hundred impressions.

Packing sheets are compressible. We have found that their thickness can change after the start of the run and thus upset the most careful preliminary calculations. So, as a double check on the packing job, LTF has suggested the use of a packing gauge. One, designed some years ago, consisted of a precision ground steel bar with a dial type micrometer fastened at one end.

In use, the bar was placed on the blanket or plate and the dial reading was zeroed. The bar was then moved to the side of the cylinder so that the plunger that operated the indicating needle was on the cylinder bearer. The dial reading then showed the difference in the height of the blanket or plate and the cylinder bearer.

The idea behind this instrument was good but it had the same type of drawback of a machinist's micrometer. The reading shown by the packing gauge could vary according to the amount of pressure used to hold it against the blanket. It is seldom that any two men use the same pressure or that the same man used the same pressure at different times. Also, measurements varied if the bar was not held absolutely flat on the blanket and exactly parallel with the cylinder.

Develops New Packing Gauge

Recently a new improved type of packing gauge has been invented by F. C. Wildeman of Madison, Wis., and developed by Colwell Litho Products in cooperation with the LTF Research Department. This instrument has a base equipped with powerful permanent magnets. When placed on steel cylinders, the base of the instrument clings tight, and the pressure against the plate or blanket is always the same.

With the base in position, a steel bar with a dial type micrometer mounted on one end is inserted in slots in the base. The plunger under the micrometer stem is allowed to rest on the blanket or plate and the dial reading is set at zero. The bar is then slid sideways in the slots in the base so that the micrometer stem rests on the cylinder bearers. The micrometer reading then shows in thousandths of an inch how much the plate or blanket is above or below bearers.

As was mentioned before, a major drawback with previous instruments has been difficulty in getting the base on the cylinder exactly

(Continued on Page 55)

Every phase of newspaper operations examined for improvement by 1000 attending Detroit's Great Lakes Conference.

GREAT LAKES PAPERS

Search Out I

EFFORTS at continuing improvement programs along every line of daily newspaper operation was apparent in many discussions held at the 14th Annual Great Lakes Newspaper Mechanical Conference which took place on Jan. 18-20 at Detroit's Statler Hotel. Interest in this was attested by a record attendance of over 1000 newspaper people from Great Lakes states and manufacturer representatives.

Goetz Elevated to Presidency

Presiding officer was Great Lakes Conference president, Robert C. Nelson, who is production manager, Detroit *News*. He was succeeded in this high post by the election of Arthur F. Goetz, composing superintendent, Milwaukee *Sentinel*, who heads the 1959-60 slate of officers pictured on this page.

Newspaper production and mechanical heads were afforded views of many new developments in equipment and supply lines for their fields at an exhibit held in conjunction with the conference. Interest at many of the display booths was described as good to excellent by many exhibitors.

It was announced that next year's Great Lakes Conference would be held at Hotel Schroeder, Milwaukee, Wis., on Jan. 16-18.

Program arrangements for the Detroit meeting were handled by a committee under the direction of Everett Hall, pressroom superintendent, Detroit *News*. The manufacturers and suppliers committee was headed by Joseph W. Agee, Mergenthaler Linotype Co., and W. S. Coulson, Imperial Type Metal Co.

Is It a Snarling Monster?

Manpower, Management and Machines was the title of an address delivered by Ray R. Eppert, president, Burroughs Corporation, at the Great Lakes Conference banquet. He stated that automation is more than using a machine as a substitute for certain processes formerly done by hand. Automation is a science, a branch of technology in its own right, dedicated to creating new and improved methods of handling any industrial or business process through the use of automatic machinery.

One of the most common misconceptions—and the most disturbing—is that automation's highest value to the economy lies in its capacity to cut costs through the elimination of human labor. He said: "It is this concern over the replacement of human workers that has brought about most of the resistance to major technological changes. If we could clear up this misunderstanding, labor-management tension would be eased and the image of automation as a snarling monster looming over us would be greatly diminished.

'Technological Unemployment'

Eppert said: "There is no question that so-called 'technological unemployment' exists. The replacement of certain tasks by machinery does occur, just as it has for centuries, and workers are sometimes left jobless—less often than most people believe, however, and usually temporarily."

The speaker related that certain jobs will be lost to machinery upon the introduction of automation, but more and better jobs are made available. Most companies that use automation are good-sized. They're able to absorb production workers or office personnel in other positions. Normally, it is a matter of years before planning and research can be completed to make a major change possible. This gives everyone time to plan ahead.

Quoting from a recent magazine article, Eppert said: "The typical job trend in automated plants as of January shows professional and

Newly-elected officers of the Great Lakes Newspaper Mechanical Conference. Left to right: Don M. Clark, stereo superintendent, Grand Rapids (Mich.) *Press*, secretary-treasurer; Arthur F. Goetz, composing superintendent, Milwaukee *Sentinel*, president; Robert C. Nelson, production manager, Detroit *News*, retiring president; Elmer Fuller, production coordinator, Cleveland *Press*, first vice president; Theodore R. Gardiner, chief machinist, Indianapolis *Star* and *News*, second vice president; Ralph Preddy, press superintendent, Detroit *Times*, third vice president; Edwin A. Koffke, mail superintendent, Milwauke *Journal*, fourth vice president.

By EDWARD H. OWEN, *Editor*
and MacD. SINCLAIR, *Consulting Editor*

Improved Methods

white collar personnel up 53%, and production personnel, where the greatest problem lies, is up 1.3% overall. This seems to indicate . . . that automation has increased job opportunities."

Will Increase Productivity

Automation is a means of increasing productivity. This is essential to the growth of any economy. "Our economic history," said Eppert, "shows that the more we have produced the more work there has been available at better wages.

"The obvious economic values of automation are not automatic. They must be harnessed properly. This is the task of both management and labor. Labor recognizes both the inevitability and the desirability of technological change. Their problem is that of guarding the human rights of these working people during periods of conversion to more progressive methods of production."

With respect to our future advancing economy, Eppert said, we must increase our productivity per individual or suffer the consequencies. Automation is one way to do it. "But no matter how easy it is to explain the blessings of automation in terms of the general economy, the immediate effect upon

Equipment Exhibits Were Popular

(All names read from left to right)

1—Bob Edwards, Nolan Corporation; Robert Finney, assistant mechanical superintendent, Lancaster (Pa.) Newspapers, Inc.; W. A. Nolan, Nolan Corp.

2—Edward J. Crowley, Pate Company; Fred Chevalier, stereo superintendent, Racine (Wis.) *Journal Times*; Sherman E. Pate, Pate Company.

3—Robert Niebling, composing room foreman, Elyria (O.) *Chronicle Telegram*; William Johnson, Radio Corp. of America; Robert Garden, composing room superintendent, Toronto (Can.) *Star*; Find Sandgren, RCA.

4—John W. Vesper, mechanical superintendent, and Clarence Kemnitz, pressroom superintendent, Beloit (Wis.) *Daily News*; Douglas M. Souter and Edward R. Lee, Gay-Lee Co.

5—Theo. Hommel, Unitronics, Inc.; Donald Campbell, camera room superintendent, and Henry Rzepecki, plant superintendent, Tri-Litho Plate Service, Detroit.

6—Russell Barrows, mailroom, Detroit *News*; H. H. Downs, U. S. Steel Supply Div., U. S. Steel Corp.

7—Alex Posick, composing room superintendent, South Bend (Ind.) *Tribune*; Gene Mooers, and Kenneth B. Beattie, president, Kenro Graphics, Inc.

8—Robert Robinson, Certified Dry Mat Corp.; Richard Westfahl, stereo superintendent; Milwaukee *Journal*; John Copeland, production director, Minneapolis *Star* and *Tribune*.

those individuals who might be displaced by it is of great concern to all of us. Organized labor is dedicated to seeing that these people are treated fairly; management is equally obligated to plan toward the same end."

Small Newspapers Expose Own Problems And Report on Their Solutions

REPRESENTATIVES of many small daily and weekly newspapers in the Great Lakes area had their say at the Non-Metropolitan Session of last month's Great Lakes Newspaper Mechanical Conference at Detroit. Presiding were, Stanley Amos, press-stereo superintendent, Lafayette (Ind.) *Journal* and *Courier* and Ben Whitacre, composing room superintendent, Kokomo (Ind.) *Tribune*.

Appreciation of the problems of people in other departments of the small newspaper was given by Harold Burtt as the principal reason for successful operation in the small daily field. Burtt, who is assistant general manager of Federated Publications, said that on the smaller papers everyone has a knowledge of everyone's problems and added that there is a greater desire to help other departments.

He suggested weekly meetings of departmental heads as a means of accomplishing cooperation. The following were points he named as rules for such meetings: They should be held every week; some person should be in charge of the meeting; everyone should be called on to see if he has anything to discuss at the meeting; it should be understood that any criticism of an individual or department that is made is not carried outside the meeting room; and everyone must understand that no one is "shooting" at anyone when a problem is brought up about his department.

$1000 for Dispatch Room

Operations of the non-metropolitan composing room were related by Chairman Whitacre whose talk was based upon a description of that department at the Kokomo (Ind.) *Tribune*. He told of establishing a dispatch department on an equipment investment of about $1000. Admitting that the department was small, he said it was their opinion that such an operation is better than none.

Whitacre described a markup table of the *Tribune's* own design. It is 6 ft. long and the same height as the ad assembly frames. The markup man can either stand or sit while working. The table has a high back, the front side can be used for a calendar, ad measures, numbers of orders or any other markup information needed. The back side of the table has a row of hooks and advance ads are marked up and placed on the hooks according to the release date.

Among the features of the *Tribune's* composing room mentioned by Whitacre are that a fully-equipped saw has been installed between every two ad frames. The lights on these saws are wired to turn on and off with the motor switch.

Scan-A-Graver Editorial Color

Successful printing of editorial color with Fairchild Scan-A-Graver engravings at the Peru (Ind.) *Daily Tribune* was the story of A. W. Schmidt, pressroom superintendent. His paper was read by George Murray, Kokomo (Ind.) *Tribune*.

Included among the equipment for accomplishing this at the Peru paper are a Capco portable ink fountain and Curtis color camera. Schmidt said that the *Tribune's* photographer learned it was necessary to retain as much shadow in highlight area detail as possible for successful color. They used a slightly darker print and a slightly higher white control setting on the Fairchild Scan-A-Graver. Next, they learned that photographic prints had to be angled on the copy drum of the machine to produce a 30 deg. spread between screens.

The press superintendent added: "In our tests we found we could save time and cost by retaining the three original plates which had been routed with the exception of the area where the Fairchild plastics were held. Although this meant positioning the picture in the same spot on the page each time, it did save time and labor in casting and routing."

He credited a team made up of the mechanical superintendent, two men in press and stereo, and a photographer for the successful results obtained in the *Tribune's* color program. He noted: "We try to stay as flexible as possible by scheduling in a certain amount of color prepared from service mats in between Fairchild plate color and regular ads. This makes for a steady diet of color for the reader, but still retains vitality and interest because of the change of pace."

Schmidt maintained that they have the capability of running a color news photo, without masks, within three hours after it is received. He said future tests will include an attempt for better color improvement through masking methods. Also, they will try splicing present size plastic engravings for producing larger color illustrations.

Controls News Matter Volume

The problem of having too much news matter to set one day and then the next day have more machine time than is required was exposed by Cecil Watkins, production manager, Sidney (O.) *Daily News*. He related a solution they found for setting straight matter in equal amounts each day regardless of the size of the paper.

As a result of a study of reading matter requirements, Watkins said they established a budget of 1500 column inches for each day's publication. This figure was controlled in the editorial department by means of a budget control sheet. The sheet originates in the advertising department where the advertising figures are compiled and page dummies are made up. From the advertising department, the control data sheets go to the editorial department where the final decision as to the number of pages to run is

Other Great Lakes Conference Reports Start on Page 56

decided. The composing room then receives a copy of the completed control data sheet one day before publication date.

Watkins said, with the same number of inches of reading matter desired for each day, a definite schedule can be set up both in the editorial room and the composing room to handle that figure. A fluctuation in advertising inches does not create too much of a problem, he added, since there is a two day deadline on ads.

When there is more space available than the regular advertising space and the budgeted editorial space, then the extra space must be filled with standing special promotion ads. Several sizes of these ads are available for use at any time. Also, the *Daily News* maintains a standing filler bank of 14 galleys as a precaution should an emergency arise. He credited the budget program for an improvement in the operation of their composing room.

Speed of TTS Operators

Audience discussions of composing room operations in the non-metropolitan field were continued in a separate session conducted by Watkins. Operation speeds of Teletypesetter perforator operators was one subject taken up by the group. It was generally agreed that 350 lines per hr. was a good speed for the average operator. Some plants, it was reported, are getting up to 510 lines per hr. Another executive said they are averaging between 350 and 375 of corrected lines per hr. in two years of operation. Three to seven errors were considered average on a 20 in. galley of TTS-composed type.

The group next considered the average lines per minute which can be set on Linotype Comet and High Speed Intertype machines. Only two reported they were getting 12 lines per min.; a considerable number signified that 10 lines per min. was their production speed; others reported 9 lines per min. A member of the audience noted that he gets better production at 8⅓ lines per min. Most agreed they would prefer to run these machines slower, but have increased speeds because they have to. Faster wear on matrices was cited as a disadvantage of the higher speeds.

Several suggested that it was helpful to use contrasting matrices on TTS-operated machines. One person reported that he thought it helped the monitor in watching the lines.

The question of where to locate TTS operators was also discussed. It was generally agreed that they should be under the supervision of the composing room and not some other department in the plant. A few held out for divorcing this operation from the composing room.

Problems of Overset

The problem of overset also came up at this meeting. It was brought out that most composing room people don't like the idea of setting type which the editors don't use. One executive said he refuses to second guess the editors and sets all copy. It appeared that many newspapers are looking into the overset situation and finding ways to stop it.

The audience was asked if they understood the function of a dispatch system. One person defined it as a control or expediting department. He said too many little problems have grown to large proportions over the years and dispatch systems have solved many of these. A number of newspapers have now

(*Continued on Page 64*)

Camera Views of Detroit Meeting

(All names read from left to right)

1—Joseph P. Dorr, Capital Tool & Mfg. Co.; C. M. Davey, assistant production manager, Hill E. Hudson, engraving superintendent, Toronto (Can.) *Daily Star*.

2—Colby Wilson, Imperial Type Metal Co.; Richard V. Marsh, engraving superintendent, Columbus (O.) *Dispatch*; John F. Dalton, engraving superintendent, Indianapolis (Ind.) Newspapers, Inc.; R. M. Burger, engraving superintendent, Springfield (O.) *News-Sun*.

3—Glenn A. Ward composing foreman, Eugene J. Roshak, production supervisor, Owens-Illinois Glass Corp., Toledo, O.; Erv Arpe, Morrison Company.

4—C. M. Davey, assistant production manager, and R. Garden, composing superintendent, Toronto (Can.) *Daily Star*; Paul S. Chisholm, Mergenthaler Linotype Co.

5—Hugh Sublett, makeup editor, Cincinnati *Enquirer*; R. B. Wallace, publisher, Coshocton (O.) *Tribune*; Clinton Carter, Fairchild Graphic Equipment, Inc.; Fred C. Finzer, Vogt Roller Co.

6—Donald O. Newman, composing superintendent, Pontiac (Mich.) *Press*; R. G. Heinrich, Hamco Machines Inc.; Norman E. Andress, machinist, Pontiac (Mich.) *Press*.

RESEARCH *Activities in Printing Industry*

LTF Executive Director Named—The board of directors of the Lithographic Technical Foundation, Inc. has announced the appointment of William H. Webber as executive director. He succeeds Wade E. Griswold, deceased, who served as executive director for 14 years. Webber was previously employed by Time, Inc., and organized and was president of its subsidiary, Printing Developments, Inc. He introduced the Springdale Scanner, the Lithure offset plate and made various surveys and market studies for new printing products. After leaving Time, Inc., Webber was vice president and general manager of the Cylinder Plating Div., Color Production Service, Inc. In the consulting field, Webber has specialized in the marketing of new printing products and processes.

CLOWES

Forms Research and Development Department — Cullom & Ghertner Co., Nashville, Tenn., general and business forms printers, has announced the formation of a research and development department, reports Alven S. Ghertner, president. The new department will be under the supervision of John Clowes, whose main duties will be to investigate the development of new products and printing services.

Du Pont Promotions—Charles M. Hunter, control manager of the DuPont Company's Photo Products Department, has been appointed special assistant to the management of the department to co-ordinate the photopolymer printing plate development program. He succeeds Colin I. Bradford, who has joined the staff of the Development Department. J. Roy Kelly has been named control manager of the Photo Products Department.

Oxford Research Appointment — Harold M. Annis has been elected vice president of research and development, Oxford Paper Co., it was announced by William H. Chisholm, president. Annis has been with Oxford 22 years. He is a member of the executive committee of the Technical Association of the Pulp and Paper Industry and a member of the research committee of the Lithographic Technical Foundation.

International Printing Research Conference — *Color and Printing Inks* will be the theme for the Fifth Intl. Conference of Printing Research Institutes to be held at Lehigh University, Bethlehem, Pa., June 8-13. The host organization will be the National Printing Ink Research Institute. Conferees will be members of established research institutes in the Graphic Arts throughout the world. In addition to representatives from most European countries, several delegates from Russia are planning to attend for the first time in the history of the conference. Japan and Australia are also expected to participate in the proceedings.

Financial aid to foreign delegates for travel has been provided by NPIRI, the Research and Engineering Council of the Graphic Arts, the Technical Assoc. of the Graphic Arts, and the Institute of Paper Chemistry. Special events will be sponsored by the New York Printing Ink Manufacturers Assoc. and the American Newspaper Publishers Assoc. Research Institute. Those who have a positive contribution to make to the conference should address requests for participation to J. M. Fetsko, conference program chairman, NPIRI staff, Lehigh University, Bethlehem, Pa.

'Blue Sky' and Engineering Approaches Urged by Two ANPA Research Groups

OF IMMEDIATE interest to the management, production and mechanical executives in ANPA member newspapers are the reports submitted by members of the ANPA Research Institute Production Engineering committee and the ANPA Research Laboratory Evaluation committee. The reports were submitted to the ANPA Research Institute. While the two committees are in agreement regarding some accomplishments of the ANPA research activity during the 10 years since its establishment, they are opposed as to the prime objectives to be pursued in the future research program.

The Laboratory Evaluation Committee recommends strengthening the laboratory function. The laboratory itself should not be relegated to a secondary role under engineering and training programs. The connotation here is that the prime objective would be that of finding new ways to produce newspapers.

The Production Engineering committee, on the other hand, asserts: "Research direction should point more toward the needs of newspaper production today rather than blue sky future methods of producing news media."

Committees Agree on Value Of Work Done

Both committees reported their evaluation of the research work done to date. For the amount of money spent much good has been accomplished. The committees report that of the 96 research projects undertaken by the laboratory since 1949 the most valuable have been development of the packless stereo-

type mat and the powderless etching method of photoengraving. Both committees report the need for a laboratory projects coordinating committee.

Each committee presents a plan for future conduct of the research program. These reports have been submitted to ANPA member-paper publishers concerned.

Reorganization proposals to bring the research activities under recommended supervision and procedure have been made by each committee.

The 1958 estimated budget for the Research Institute was reported as follows: ANPA, $250,000; Special Dues, $100,000; Royalties, $20,000, and extra income, $7,000. Actual expenditures were $370,762.

The Research Laboratory in Easton, Pa., owns $204,456 worth of equipment. Equipment on loan from various manufacturers totals $239,499 in value.

President Appoints Committees

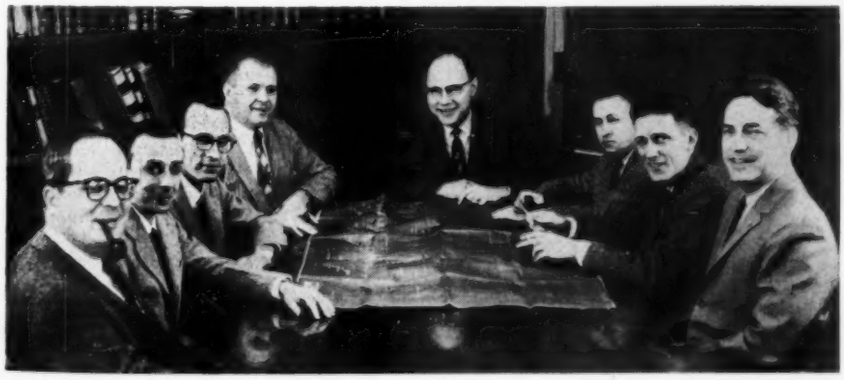
In the past year, the president of the Research Institute, Lisle Baker Louisville (Ky.) *Courier Journal* and *Times*, appointed two committees consisting of management and production executives from ANPA-member newspapers. Personnel of the two committees follows:

Laboratory Evaluation Committee (Appointed April 1, 1958)—Julian J. Eberle, production manager, Miami (Fla.) *News;* W. H. James, assistant business manager, New York (N. Y.) *Daily News;* Donald R. Newhouse, production manager, Portland (Ore.) *Oregonian;* Alex T. Primm, production manager, St. Louis (Mo.) *Post-Dispatch;* Philip S. Weld, publisher, Gloucester (Mass.) *Daily Times;* Chairman of the Committee, Otto A. Silha, vice president and business manager, Minneapolis (Minn.) *Star* and *Tribune*.

This committee was appointed to evaluate the Institute's Easton (Pa.) Laboratory — "including such instructions from the Institute's executive committee" to "examine the laboratory and the work accomplished to date as well as the work in progress, and to answer the question: Whether the laboratory and the research program should be expanded or contracted—and how?"

Production Engineering Committee—This committee was appointed by President Baker on June 17, 1958 "to evaluate the production engineering aspect of the ANPA Research Program":

Otis Booth, assistant to general manager's office, Los Angeles *Times-Mirror;* Robert Nelson, mechanical superintendent, Detroit *News;* John Barron, mechanical superintendent, LaSalle (Ill.) *News-Tribune;* and chairman, W. Howard Baldwin, vice president and general manager, Houston (Tex.) *Post*.



Typical staff meeting at ANPA Research Institute's Laboratory, Easton, Pa. At these conferences one might say that research problems are discussed in microscopic but cooperative manner. Clockwise, commencing at left, are: J. Todd McLane, physicist; Harold C. Durbin, mechanical engineer; Rowan F. Dietz, physicist; Frank J. Stanczak, chemist; Roy W. Prince, technical research director; Alfred S. Taylor, laboratory director; Sherwood W. Mabus, projects supervisor; Alden E. Yelmgren, chemist.

Forms Printing Research Foundation

Printing research took a step forward last month in Washington, D. C. A comprehensive printing research plan for the Graphic Arts industry became a reality with the establishment of the Printing Research Foundation as a corporate entity.

The Letterpress Research Committee, which was formed two years ago by the Research and Engineering Council of the Graphic Arts Industry, financed a year long survey of the printing industry. The survey was conducted and the report was prepared by Chas. T. Main, Inc.

Features of the plan adopted by the new corporation include: (1) Education at the graduate level; (2) Fundamental research employing facilities already in being; (3) Correlation of applied research in specific areas of the Graphic Arts industry.

Financing of the survey was jointly sponsored by American Photoengravers Assoc., Book Manufacturers' Institute, Inc., and the Intl. Assoc. of Electrotypers & Stereotypers, Inc.

Laboratory Evaluation Committee

The major proposal of the ANPA Laboratory Evaluation committee would be to integrate the Institute and Mechanical Department, consisting of three divisions, to be known as the ANPA Production division, or ANPA's Research and Production Institute, Inc. The divisions would be as follows:

Research Center—Responsibilities would be laboratory research; coordination with newspapers, suppliers and manufacturers on research.

Engineering and Training Division—With Research Center cooperation, project evaluation in the field prior to research and testing of completed research projects; efficiency studies; industrial engineering; training of production personnel.

Information and Service Division—Centralize publication of bulletins, convention management, organization of seminars on research, and clearing house for mechanical and production information, and, eventually, quality control service tests.

In its report with particular reference to the reorganization angle, the Silha committee recommends retaining the Projects committee; that

(Continued on Page 87)

Los Angeles' Printing Week observance was publicized by display of billboards throughout Southern California. Hollywood actress Eve Bernard, who was named Miss Lasting Impression, applies finishing touches to a billboard with the help of Ray Rochnow, Jr. (left), Printing Week chairman, and Don Dubois, designer of the Printing Week symbol.

Printers Sell Industry in 1959 Printing Week Events

Emphasis again placed on informing high school students about the career opportunities available in the Graphic Arts

PRINTERS in the United States and Canada once more used International Printing Week to sell their industry to the general public and to publicize the career opportunities it offers to student populations. Reports from many cities give evidence that they succeeded by offering programs which required the full week of Jan. 11-17 to present.

The combined educational and public relations effort consisted mainly of scholarship presentations to promising high school students, essay contests, printing displays, prominent speakers, and banquets. Local television stations and newspapers gave time and space to Printing Week messages.

In a telegram to Kurt E. Volk, president, Printing Industry of America, Inc., President Dwight D. Eisenhower said, "During the week in which we celebrate the birthday of Benjamin Franklin . . . it is most fitting that we pay tribute to the tradition of America's free press and to the daily contribution which the printing industry makes to the lives of us all."

Participants in the 1959 celebration included groups in all sectors of the Graphic Arts. Coordination was handled by the Intl. Craftsmen's Assoc., under the direction of Gerald L. Flood, Intl. Printing Week chairman, Santa Monica, Calif. In many cities councils were formed to plan special events, take care of displays, arrange for speakers, handle publicity, etc. A report of some of the activities in various cities follows:

Eric Johnston (left), president, Motion Picture Assoc. of America, received the Franklin Award of the New York Employing Printers Assoc. from Robert L. Sorg, NYEPA board chairman, at the annual Printing Week dinner held by printers in New York City.

Eastern Cities Celebrate

One of the highlights of the New York celebration was the presentation of the 1959 Franklin Award for Distinguished Service to Eric Johnston, President Eisenhower's special ambassador to the Middle East and president, Motion Picture Assoc. of America. Almost 1000 pieces of printed matter produced in the New York City area during 1958 made up the 17th Exhibition of Printing, sponsored by the New York Employing Printers Assoc. Formal dedication of the New York School of Printing comprised another important event.

Dr. Roy B. Eastin, executive officer of the Government Printing Office, Washington, D. C., discussed *Printing and the Future* at Rochester Institute of Technology. A feature of the Syracuse, N. Y., celebration was the presentation of books to the Syracuse Public Library for a special Graphic Arts section. The main speaker at the banquet was Floyd C. Larson, executive secretary, Intl. Assoc. of Electrotypers and Stereotypers.

Senator, Governor Participate

Hon. H. Alexander Smith, U. S. Senator from New Jersey, received the annual Outstanding Citizenship Award at the Newark Printing Week dinner. Another activity was an exhibit contest among the five vocational and technical high schools. Washington, D. C., printers heard a talk on *The World of Printing Today* by Walter F. McArdle, vice president, Printing Industry of America.

Gov. Theo McKeldin of Maryland spoke to Graphic Arts audiences in the Boston and New England area. The week's activities also included the New England Book Fair, exhibited at the Boston Pub-

lic Library. Educational plant tours for students and a poster contest were other features of Boston's program. The Springfield (Mass.) Craftsmen's Club sponsored an essay contest for high school students, and also awarded a bronze bust of Benjamin Franklin to the Springfield Trade High School. Some of Franklin's original papers were on display at the Yale University Library, New Haven, Conn. Whitfield Bell, associate editor, *Papers of Benjamin Franklin*, addressed New Haven's Printing Week banquet.

A poster contest, along with radio, television and newspaper publicity helped celebrate Birmingham, Ala.'s, observance. New Orleans selected a Miss Printer's Devil to promote the printing industry. Gov. J. Lindsay Almond, jr., of Virginia, issued a statement in recognition of activities held throughout major cities in Virginia. Principal speaker at the Houston, Tex., dinner was William

Printing Week Pictorial

(All names read from left to right)

1—Minneapolis-St. Paul, Minn., committee members add comedy to the queen judging contest. Seated are Felton Colwell, Colwell Press, general Printing Week chairman, and Ed Strong, Harris-Intertype Corp., co-chairman. Standing are: Dick Anderson, Walter G. Anderson Co.; Ed Mjos, A. J. Dahl Bindery; Bob Jendro, Walter G. Anderson Co.; Bill Gary, Printing Industry of Twin Cities; John Mjos, A. J. Dahl Bindery; Dan Shay, Minneapolis Laker Basketball Public Relations; Oscar Carlson, Midwest Litho Service, and Pierce Wikman, John Leslie Paper Co.

2—Principals in Pittsburgh's celebration are: James V. Thunnel, banquet chairman; Arthur W. Rippl, president, Printing Industry of Pittsburgh, Inc.; Mary Lou Conley, Miss Printing Week of 1959; Harry M. Fritz, jr., Printing Week chairman, and Donald W. Gothe, president, Pittsburgh Craftsmen's Club.

3—Students from several Dayton, O., high schools observe a printing student operating a linecasting machine at a Printing Week meeting held at John H. Patterson Cooperative High School.

4—Toronto, Can., observed its first Printing Week celebration with the signing of a proclamation by Mayor Nathan Phillips. Pictured are: John Redshaw, Printing Week co-chairman; David MacLellan, editor, *Canadian Printer & Publisher;* Len Thomson, Printing Week chairman; Alf Foote, secretary; Maurice Folan; Mayor Phillips; Reginald Cooper; Bob Vandenbossche; and Roy Gurney, president, Toronto Craftsmen's Club.

5—Winners in an essay contest sponsored by the Springfield (Mass.) Craftsmen's Club are: Joseph Connolly, Joseph Artioli, and Paul McCarthy. William J. Corbett, Wild & Stevens, Inc., congratulates them.

Cleveland Printing Week was highlighted by an exhibit set up in the display center of the new Electric Illuminating Co. building. Keystone of the display was the Awards Exhibit of the Lithographers & Printers National Assoc. Also shown were movies, and an antique hand press operating alongside a new Harris offset.

T. Clawson, advertising and promotion manager, Harris-Intertype Corp.

Printing Creates the Lasting Impression was the theme for Los Angeles' Printing Week celebration. A Benjamin Franklin Award was presented to Air Force Gen. Joseph D. Caldara. One of the highlights of San Francisco's observance was the American Institute of Graphic Art's exhibit, *Printasia—A Symphony of Fine Printing,* which was a selection of the best in printing and publishing for 1957-58. Lawrence L. Jeffries, vice president, Jeffries Banknote Co., was the guest speaker at the Santa Monica, Calif., banquet. Sacramento, Calif., heard Fredric A. Heitfeld, director of special events, California State Fair and Exposition.

Midwest Programs Successful

Midwest cities again presented successful programs. Detroit's events were planned by the newly-formed Detroit Printing Week Organization, Inc. A $500 scholarship was given to a high school student who plans to become a Graphic Arts teacher. Chicago featured a program on *Lithographing of Foil,* presented by Reynolds Metals Co. Countess Maria Pulaski, renowned espionage agent, spoke at the Waukegan, Ill., banquet, sponsored by the North Shore Craftsmen's Club.

Plans for a new technical center, which will include a modern printing plant, were revealed at the Printing Week dinner held in Kansas City, Mo. St. Louis's activities included the selection of a Miss Printing Week, two plant tours, and a talk by Philip J. Hickey, superintendent, St. Louis Public Schools. Milwaukee's program featured a talk on *Interurbia the Changing Face of America,* by a panel of men from J. Walter Thompson Co., advertising agency. In the Minneapolis-St. Paul, Minn., area printing firms held open houses during the week to acquaint students with their facilities.

Clifton Daniel, assistant to the managing editor, New York (N. Y.) *Times,* spoke in Cleveland. Guest speaker at the Columbus, O., celebration was C. L. Jewett, general manufacturing manager, Minnesota Mining & Mfg. Co. Pittsburgh presented a Franklin Medallion to Leland Hazard, Pittsburgh Plate Glass Co.

Toronto, Can., observed its first Printing Week celebration with emphasis on showing students in secondary and vocational schools the opportunities in the Graphic Arts.

Winners of the Printing Week essay contests held in Montreal, Can., received plaques such as this one which will remain at their schools until competed for next year.

Pictured at left is Kay Ellen Rauch, Milwaukee's Miss Printing Week, with Robert Buntrock, Milwaukee Assoc. of Commerce. Officers of the Detroit Printing Week Organization, Inc. are in center picture. They are: Clarence G. Schroeder, Allied Trades Council; Harry R. Schramm, R. L. Polk & Co.; A. Ted Annen, Shelby Photo Engravers Co., and Ronald MacDonald, Graphic Arts Assoc. of Mich. At right are S. F. Schoenfeld, Zellerbach Paper Co., and Wayne C. Wade, executive secretary, Graphic Arts Employers Assoc., examining the official program of the American Institute of Graphic Arts exhibit shown in San Francisco.

Outlook for Equipment Makers Brighter With Advancing Newspaper Technology

IN a recent issue of *Barron's National Business and Financial Weekly*, Mel Most tackles the expansive economic and technological situation in the newspaper printing industry. The article is written by an "outsider" with keen appreciation of existing conditions. With respect to mergers of companies who were already in the communications field they have now entered the printing equipment manufacturing field. Seemingly, these merged companies compete with themselves.

Two leading firms in different sectors of the communications industry, reports Most, recently joined to make a surprise announcement. Radio Corporation of America will make and market several newspaper production devices engineered by Dow Jones & Co., publishers of *Barron's, The Wall Street Journal* and the Dow-Jones financial news service.

Continuing, it is stated in the *Barron's* article: "If the inventions themselves are newsworthy, even so is RCA's plan to expand them into a complete line of automated machinery for its traditional rivals, the newspapers. Actually, RCA is but one of many large outside concerns that of late have been moving into this preserve. Fairchild Camera & Instrument, to take another example, enjoys a rising volume in sales of goods and services to the press."

Up and Down Market

For years, according to Author Most, the mechanical departments of dailies and weeklies alike have been a notoriously up-and-down market; their purchases tend to rise and fall sharply with the economic tides. Most of the established suppliers have thought of newspapers as at best a long-run replacement market. Indeed, long before the recent drop in advertising further squeezed the profit margin of most U. S. periodicals, even well-entrenched makers of such equipment were finding the going tough. Many following the lead of newspapers themselves, felt compelled to strengthen themselves by mergers.

Most stated that today, however, the supplying firms, old and new, energetically are re-exploring the market's possibilities—and for several good reasons. In view of the cost-price pinch, more than one publisher is taking a hard look around his plant for new ways to make or save money. Sooner or later, his glance is likely to fall on various kinds of outmoded equipment. Into this potentially huge market, the suppliers are wedging their way wherever they can offer rapidly amortizable improvements.

Largest Advertising Medium

After commenting upon the relatively few principal equipment manufacturers and hundreds of small shops that supply the mechanisms and parts that take a paper through a gauntlet of costly production processes, the writer stated: "Newspapers remain by far the largest medium for advertising, which provides 70% of their revenues. Although linage fell 3% in 1957 from a 1956 peak, increased rates boosted the 1957 outlay for newspaper advertising another 1%, to $3\frac{1}{3}$ billion."

An important question is asked and answered by the writer: "What, then, has held back the equipment market? For one thing, newspapers, which characteristically yield low returns, usually have to cut every possible corner to meet the cost squeeze. Equipment, on the other hand, is quite expensive. A new linecasting machine costs from $10,000 to $12,000. A new 10-unit press (by no means the biggest) will run to half a million dollars or more, not counting the probable cost involved in housing it.

"Secondly, some suppliers are competing, in effect, with themselves. For in view of the price tags, their machines must be built to last. . . . In consequence, many a metropolitan newspaper still is being run off on battered 30-year-old presses. Thousands of linecasters in use throughout the country are similarly venerable, and small weeklies often use fifth or sixth-hand equipment."

Few New Customers

A further handicap to the equipment makers, observes Most, is that they can expect to gain few new customers. Because of the many risks and the characteristically low returns, almost no sizable dailies have been started in the past 29 or 30 years. In other words, the market consists of established newspapers which are fully equipped with capital goods paid for long ago, except for occasional plant expansions.

The trend has been just the other way. Between 1937 and 1941, the number of U. S. dailies declined by no less than 250. . . . The dwindling of this country's newspaper population has had two damaging effects on the suppliers. First, the closing down or merging of many publications threw a glut of second-hand machinery on the market. Secondly, it has freed the great majority of publishers from local competition that might spur improvements in their production methods.

Biggest Obstacle

Biggest obstacle of all, asserts Most, has been the cautious attitude of both management and labor. Since so many things play a part in the success or failure of any newspaper, its publisher is little inclined to consider that it is, after all, a factory. The unions, for their part, have resisted attempts to reduce the working force by the use of labor-saving devices.

In the *Barron's* article it is stated that of late the outlook has brightened somewhat for the equipment makers. For one thing, merged ownership of morning and evening papers, and even a trend towards sharing of a single plant by separately owned publications, has made more capital available for those plants. On the other hand, those publishers who have seen competing papers go out of business have all enjoyed a temporary lift, and then have discovered that costs inevitably catch up with them again. Since the bulk of these costs are in the mechanical operations, management here, too, is beginning to show more interest in production engineering.

(Continued on Page 86)

A Printer Presents

WORM'S EYE VIEW

Regarding Composing Room Costs

WORRIED about high composing room costs? Considering new processes? Of course you are, but is your present plant running at peak efficiency? I have worked as a printer for 20 years and have yet to see the composing room that could not be improved.

A plant may appear efficient from the lofty perch of the production manager, but from the worm's eye view of the working printer another picture is revealed. Unfortunately for the average production manager, he is rarely privileged to share that view. So, we'll present the lowly worm's eye view of the picture.

A frustrating condition with which a newspaper composing room foreman must contend is the matter of unpredictable advertising proof store alterations. This problem is a holdover from days gone by when making store alterations didn't amount to much. But like Topsy, "it just grew and grew."

Unfortunately, many newspaper composing rooms are not operated upon a time unit basis. Each month when the business office receives the monthly operating cost sheet, it wants to raise hell about excessive labor time. The foreman is in the middle. Too frequently, answering the business office's questions, the foreman must give a personal opinion. He can only attempt to explain "out of his head" about the nonproductive time caused by excessive reconstruction. Sometimes the reconstruction time spent by a number of compositors on one advertisement exceeds the entire time spent in producing the original advertisement.

I think the foreman, through the proper channels, would get smart and install a time-card system such as is used in the typographic composition houses. Does such a system cost money? Of course it does. After installation of such a system it will be obvious to business management that the only solution will be to make a charge for high cost alterations. Seems as though management executives in some plants don't have the nerve to bill the advertiser for excessive alterations.

Full Machine Production

One of the principal production operations is at the typesetting machines. If they are not working satisfactorily, you are not getting full production. One of the biggest obstacles to full production (granted that the operator is a normal worker) is the machinist. You do not know whether your machinist is good or bad—only an operator knows that. A highly skilled machinist is not necessarily a good one. While he may have the ability to repair any machine, he may also have the ability to destroy the operator's will to work by being reluctant to use his talents. Few operators will push a sluggish machine for long; they just calm their fluttering ulcers and slow down to the speed of the machine.

In many composing rooms the machinist usually has the ear of the foreman, who rarely knows a lot about the machines. The machinist is often knife grinder and mower mender to anyone in authority. Few operators will cross him. It is difficult, almost impossible, to lay the blame for a faulty machine where it belongs—on the machinist. He is adept at shifting the blame to the operator. I have worked with faulty quadders that caused squirts with frightening regularity, but the fault was always mine. The result is that now when I find a quadder is faulty I inform the machinist, then stop using it. The foreman does not know I am not using it; he does know I am having no more squirts. He is contented; the machinist is delighted; I am indifferent. I am also setting less type.

Anti-mower Mender

However, let's qualify these statements. In some composing rooms the foreman alone is responsible for such situation. He may wish to keep down payroll costs by (1) Not permitting the machinist sufficient

EDITOR'S NOTE

The author of this outspoken article on the state of newspaper composing rooms remains anonymous for obvious reasons. His observations, presented here in a highly entertaining style, are based upon his experience in composing rooms. Readers should find his criticism provocative because he meets a number of issues head on although some will consider his solutions unorthodox.

help to keep the machines in good operating condition, and (2) By refusing to pay the machinist above-scale salary commensurate with his responsibilities. Thus the foreman temporizes with an aggravating situation when he knows full well that the machinist's objective is to maintain the equipment in good operating condition at all times. Today's competent machinist will have no time at his disposal to sharpen lawn mower blades or do other odd jobs.

Continuing our discussion of things as they should not be, let's say that getting any machinist to make a major repair is no problem. If a cam breaks, if a belt snaps, all the little wheels stop turning; it is obvious to everyone that something is wrong, and the machinist goes to work. But if minor repairs or adjustments are needed, if the keyboard is sticking or the magazine is dirty and matrices are hanging, then the operator is at the mercy of the machinist and his moods. He reports the trouble, slows down to the pace of the machine, and perhaps prays. He can do no more because the machinist can, if he wishes, prove that nothing is wrong by setting four or five leisurely lines and pointing out that he had no trouble doing so. If the foreman is watching he will view the operator with a jaundiced eye and walk away shaking his head.

Appoint Assistant Foreman As Chief Tester

This is a difficult, but not an impossible obstacle to overcome. Here's a remedy. The foreman can appoint an operator as assistant foreman with the duty of operating each machine in turn (perhaps one or two a day) and putting the machinist to work when he finds a fault. This operator should, if possible, be a long-standing enemy of the machinist. But if they should ever become friends, the foreman is back where he started from and must appoint another man.

Many machinists are squirrel-like. They hoard matrices and very small screws. They prefer half-empty magazines to full ones because they are easier to move around. When the machinist drops a screw in a pile of slug trimmings he insists on finding it. He has other screws, lots of them, but he wants to find the screw in the shavings. Finding it is a challenge to his manhood. Regardless of the cost to you in lost time, he will meet that challenge and find that 10c screw.

Lousy Economics

You must explain to the machinist that the real challenge is in getting the machine running—not in finding a screw. Patiently, with pencil and paper, prove to him that it is lousy economics to pay a man $5 in wages to find a 10c screw. And you must break his arm if necessary and force him to disgorge his hoard of matrices and put them where they can be made to do their work—in the magazines.

There are some excellent machinists. They, too, have their gripes. The major one is that they do not get paid enough money. A good machinist is worth more to you than either your foreman or your wife and much more difficult to keep.

The Markup Function

On newspapers, other obstacles to smooth production are the gentlemen who markup the advertising copy.

Apart from their penchant for marking lingerie ads in extra bold gothic and meat market ads in delicate scripts, they have a love for elegant variation. It seems to be the rule in many ad alleys to have five families of type that are closely related. They are so closely related that they confuse the markup men, who, in their confusion demoralize the operators by marking one member of each family in each and every ad. And they infuriate the Ludlow operators by marking copy in Ludlow typefaces that are almost identical with those on the display machines.

Markup Men Change Magazines?

Two steps are necessary to cure elegant variation. Closely examine all your display matrix fonts. When you find two that resemble each other, drop one out of the window—you don't need it.

This statement is made in spite of the idea that a contingency may arise whereby one of the fonts may not be available due to a breakdown at a critical moment. Duplicate or similar design fonts certainly were not installed to provide gymnastic handling by markup men.

Then tell the markup men what you have done, tell them they must get by with what is left, and tell them they must each spend a week in turn doing nothing but lift magazines for the operators. This will cure elegant variation and give a tremendous boost to production. And don't let anyone kid you that those other fonts will be missed.

Gutenberg would wail at today's proofreaders. There was a time when they rated as walking ency-

What's Ahead for the Reader: *Printing Production's* most popular number of the year, the Annual Plant Planning and Improvement Issue, will repeat in March with top-notch editorial features of interest to printing plant executives contemplating new or expanded plants.

One article will be devoted to arguments in favor of planning now for expansions of the future. You may find you are too late, the author points out, by not taking advantage of present conditions for studying ways of enlarging plant facilities which will be needed in the 1960s.

What is an ideal composing room equipment arrangement? Several will be offered in the March issue with diagrams for printing plants of every size. See how yours compares.

Are you wondering how other printing plants have solved their space problems? Twenty-four pages in March will show what has been going on in the plant expansion line during 1958 which will include pictures and floor plans. Many types of printing businesses will be represented.

Another valuable issue for your reference file. Take advantage of the information made available by other printing companies.

clopedias, but there are few now who could pass as pocket dictionaries. This is the result of growing belief that any ancient printer can be a proofreader. It just is not so. The basic requirement for proofreading is a sound knowledge of grammar. This is the very thing that is most often missing. Today's readers are so certain they know grammar that it is impossible to convince them that colons and semi-colons are not entirely decorative. This would not be so bad if they were all equally happy in their ignorance. But some are certain they are more learned than others. Where one, who knows no better, will insist that operators must follow copy, another who thinks he knows better, will insist that operators must correct grammatical errors. And you find both types working in the same plant. This leads to endless corrections and costs money.

You May Be Even Worse

This problem does not arise in a small shop where one man does the proofreading, for right or wrong, everyone will follow his marks. In the larger plants, however, it is a serious problem with a simple solution. Give all your proofreaders a seventh grade grammar test. It is doubtful if anyone will pass it, but take the man who does best and make him head reader with the duty of checking revised proofs for faulty readers' marks. Now I know there are many excellent readers, but the chances are they do not work for you. And let me warn you—do not argue with your readers on grammar, for bad as they may be, you may find you are even worse.

Senseless Break in Production

In all print shops a senseless break in production is the endless search for lost matrices. No matter how good the machine, machinist or operator, some matrices will drop on the floor and should be found. Why not make the finding easy? The copyboard lamp does not illuminate the floor around the machine, and a lost matrix makes an operator crawl around on his hands and knees. Finding that matrix is often as great a challenge to the operator's manhood as is finding the screw in the shavings to the machinist. Save yourself some money; spend $2.50 on an inspection lamp and hang it near the keyboard. And either have the open spaces between base and floor packed with a compound so that nothing can slip beneath the base, or on high enough blocks for a broom to be used.

Good Chairs for Operators—Should They Have Them?

And please, do get your operators comfortable chairs. In many shops the $60 a week typist sits on a $70 chair "because she works better when comfortable." But the machine operators suffer on $3 chairs picked up in some junk shop. When tackled on this subject, front office men invariably say: "We are paying the printers plenty. Why should we coddle them with easy chairs?" The answer is that you coddle them for exactly the same reason that you use only the best oil in an expensive automobile—you paid plenty for that heap, and you want to get the most out of it.

Now if you find some or all these faults in your composing room, check with your accountants—you may be bankrupt. If you find none, then look again. And when you compare your production costs with those of a plant using new processes remember this: Your costs can be lowered by the expenditure of a little money and common sense; their costs will rise as the novelty wears off and they become as sloppy as perhaps you are now. The new processes are good, but they are not the answer to a sloppy printer's prayer.

New Twist in Mechanical Program Initiated by Mid-Atlantic Conference

Setting a precedent in planning newspaper mechanical conference programs is the new twist to be followed at the forthcoming Mid-Atlantic Mechanical Conference. This meeting will be held at Shelburne Hotel, Atlantic City, N. J., on March 12-14.

Manufacturer and supplier representatives have always participated generously in various sessions at these conferences. This year, however, these representatives will be afforded an opportunity to participate in one special session, Thursday night, in the Shelburne Hotel. Participation will be in panel form. Chairman of the meeting will be Cyrus L. MacKinnon, managing director, ANPA Research Institute, Chicago. Panelists will cover newsprint, composing, mail, photoengraving, press and stereotype departments, as well as the subject of ink.

At the Thursday night session MacKinnon will discuss the new projects under way and those being considered by the Research Institute.

Main Conference Sessions

On Friday, Mar. 13, the main conference sessions will get under way. There will be four concurrent sessions starting at 10 o'clock. Two of the meetings will be broken down for participation by executives from papers under 25,000 circulation and the other for attendance by executives of papers of over 25,000 circulation. Chairman of the under 25,000 circulation session will be Robert C. Schwanbeck of the Sharon (Pa.) *Herald*. At this session a movie entitled "*How a Small Daily Prints Color*" will be shown by Regis Spielvogel of the Elwood City (Pa.) *Ledger*.

The panel type over 25,000 circulation papers will be under chairmanship of John McGann of the Harrisburg (Pa.) *Patriot-News*.

The other two concurrent sessions on Friday morning will be devoted to mutual discussions of the problems associated with weekly newspaper publishing and printing. Chairman of the Flatbed Session is Dick Rainbolt, Mount Joy (Pa.) *Bulletin*. At the Rotary Session, chairman will be Al Freeman of the Mount Holly (N. J. *Herald*.

There will be two concurrent meetings Friday afternoon, March 13, The Joint Newspaper panel will be under supervision of the chairman, Sol Swartz, mechanical superintendent, Philadelphia *Bulletin*. Panel will consist of mechanical department executives. The Joint

Weekly Newspaper meeting is under chairmanship of George H. Heintzelman, Coatesville (Pa.) *Record* and Downington (Pa.) *Archive*.

New Processes Session

At the New Processes meeting on Saturday morning, Mar. 14, S. D. (Doc) Willey, mechanical superintendent, New York (N. Y.) *Daily News*, will function as chairman. Present intention of the program makers is to cover phototypesetting and composition, electronic typesetting, glass fibre stereotype mats, Dow fast-etch process, and direct printing.

Panel personnel is as follows: Photocomposition—Frank Marsteller, director Graphic Arts, Allentown (Pa.) *Call-Chronicle* newspapers; Electronic Typesetting — Representative of *Wall St.* (N. Y.) *Journal;* Glass Fibre Stereo Mats—E. T. Gianoni, stereotype superintendent, Chicago *Tribune;* Dow Etching Process — Representative from Vineland (N. J.) *Times-Journal;* Direct Printing—Film courtesy Jacksonville (Fla.) *Journal*.

While the speaker has not been announced, the topic of an important address will be *A Publisher Takes a Critical Look at Newspaper Mechanical Operations*. This address will be given at the Saturday noon, Mar. 14 luncheon.

At the banquet, Friday night, Mar. 13, Edmund H. Harding, the Tarheel Humorist, will speak on *What's Ahead?*

Equipment and Supplies

Thirty-six exhibit spaces have been reserved for use by equipment and supplies manufacturers at the Shelburne Hotel during conference days. It is anticipated that the latest in equipment and supplies will be exhibited. In addition, the Mid-Atlantic Conference will publish a reference book in which will be described the products made by the various exhibitors. The book will be distributed to each registrant and to the entire Mid-Atlantic membership.

Craftsmen Start Convention Planning

Plans are being made for attendance of as many as 1200 Craftsmen at the 40th Annual Convention of the Intl. Craftsmen's Assoc., Sept. 5-9, 1959, at the Statler Hilton Hotel, New York, N. Y., according to Edward Blank, chairman of a 19-man planning team and member of the New York Employing Printers Assoc.

Attractions will include an educational program "with never an idle moment," says Blank, and an outstanding entertainment program. The added presence of the 7th Graphic Arts Exposition in the New York Coliseum at the same time as the convention will be a further attraction to Craftsmen.

"As evidence of the cooperation the hotel management is showing us, 900 room accommodations have been reserved for Craftsmen and their families," Blank reports.

Huge Active Committee

The 19-man team planning the convention under Blank's direction includes these committee chairmen: Program—Ferdy J. Tagle, N. Y. School of Printing and William P. Gleason, Colonial Press; Registration—Louis Croplis, American Type Founders, Inc.; Overseas registration—Lee Augustine, Printing Machinery Co.; Plant visitation and sightseeing—Herbert Ahrendt, Ahrendt, Inc.; Printing and design—Charles J. Felten, Apostleship of Prayer Press; Finance—Mortimer Sendor, Sendor Bindery; Advisory—Harvey Glover, Sweeney Lithograph Co., and Edward Sanna; Hotel—Louis Van Hanswyck, Lou Van Typographers; Entertainment — Arthur Tarling, Sleight and Hellmuth Ink Co.; Hospitality — Millard Friday, sr., Blatchford Metal Co.; International liaison—Peter Bernard; Souvenir boxes, signs, badges, decorations—Kendal Slade, Densen Banner Co.; Women's division—Mrs. Billie Slade and Mrs. Ada Croplis; Publicity and anniversary book—Henry Schneider, Charles Francis Press, and Charles V. Morris, J. B. Card and Paper Co.

"This convention is not only the 40th in the history of International Craftsmen, but it also marks the Golden Anniversary of Craftsmanship, where Craftsmanship as an educational movement first saw the light of day—here in New York City," concludes Blank.

Ready to entertain Craftsmen at the association's 40th convention is this planning committee composed of New York Club members. Standing, left to right: Arthur Tarling, Lee Augustine, Millard Friday, sr., Edward Sanna, William Gleason, Kendal Slade, Edward Stoeher, Herbert Ahrendt and Charles Morris. Sitting, left to right: Mortimer Sendor, Charles Felten, Mrs. Ada Croplis, Mrs. Billie Slade, Edward Blank, Henry Schneider, A. E. Giegengack, Louis Van Hanswyck and Louis Croplis. Company and committee connections are given in the story.

By GYAN P. MADAN

School of Printing Management, Carnegie Institute of Technology, Pittsburgh, Pa.

PART II

Halftone Making for

ENGRAVING-OFFSET

Theory and techniques are explained

IN PART I we told about the halftone screen, screen distance, lens aperture and so on. In this article we will discuss the points of practical importance as related to the making of halftone negatives with the regular glass halftone screen. These points include the problems of exposure and development timings.

Like the screen distance, the factors of exposure and development are equally important. Production of a good halftone negative of correct contrast and density depends to a large extent upon exposure and development. A negative produced with correct halftone screen setting may not prove to be good for reproduction if it has not been properly exposed and developed.

Due to variety of materials and equipments used in different plants, it is difficult to lay out a standardized procedure. However, we can say that exposure is a factor which can be standardized to some extent with the help of available light integrating meters. These instruments have been designed for measuring exact predetermined quantities of illumination according to the strength and volume of light falling on the subject.

The measuring instrument in the photocell of the integrating meter is connected to a control unit which actuates a contactor for automatically switching off the light when the required amount of actinic action has been received by the sensitive emulsion. It also automatically lengthens or shortens the time of exposure to compensate for fluctuating light intensities, regardless of whether the light intensities fluctuate rapidly as in the case of flickering arc lamps, or gradually as in the case of slowly changing line voltage. The result of fluctuating light intensity during the course of an exposure is an under or overexposed negative if no compensation is made by lengthening or shortening the time of exposure. One of the best known devices of this kind is called the Luxometer. However, this is not the only one. Full information regarding all of them can be obtained by writing to the manufacturers.

Exposure Factors

By attaching the Luxometer, to the light source of the camera and using one of the available lens diaphragm control mechanical devices (as described in Fig. 3, Part I), one can easily keep the exposure factor constant without regard to the various changes in the size of reproduction. Every change in camera extension will bring a change in the lens aperture and this will automatically compensate for the amount of light required for various sizes of reproduction. This will be true provided all other factors remain the same. Other factors include the sensitive emulsion and the reproduction characteristic of the original. Any change in these will require a change in the amount of exposure.

And this amount of exposure for making halftone negatives can be given in various ways. It can be used with single or with multiple stops. Working experience, however, has proved that an original of normal reproduction range can be easily and satisfactorily reproduced with one stop and a flash. It also has a logical support. It is that in using 1/64 ratio line for same size reproduction, the lens aperture is

TABLE VI

Copy	:	Normal contrast.
Size of reproduction	:	Same size (100%)
Ratio line used	:	1/64
Screen used	:	120 line/sq. in.
Illumination	:	Two 35 amp. arc lamps at 40 in. and at an angle of 40 deg.
Photographic material	:	Kodalith Ortho Type 3 film
Exposure: Detail	:	60 sec.
Flash with white paper	:	10 sec.
(Flash exposure was given at f.90)		
Development	:	2½ min. at 68 deg. F. in Kodalith Developer A and B equal parts, with continuous agitation.

f.32, which is a round aperature and gives a sharper definition in image quality. It is the opinion of many users that *f*.32 is able to produce satisfactory results with screen rulings of 100 lines per sq. in. and above.

But the one stop method also has some limitations. The main limitation is that the exposure latitude is greatly limited. This limitation provides little opportunity for control of contrast in the halftone negative and also sometimes weakens detail and alters appearance of the image.

On the other hand, there are two stops and a flash, and three stops and a flash methods of giving exposures. Both these methods are widely used. It is difficult to state as to which one is superior. All depends upon each individual's working conditions.

In the two stop system, ratio lines of 1/48 and 1/64 are used. The larger stop (1/48 ratio) is used for giving highlight exposure and the smaller stop (1/64 ratio) is used for detail exposure. An exposure ratio of 1:4 is used in calculating the exposure for highlight and detail stops.

In the three stops system the ratio lines used are 1/48, 1/64, and 1/90 and the exposure is calculated in the ratio of 1-2-4 respectively. The 1/48 ratio gives the highlight stop, the 1/64 ratio middletone, and the 1/90 shadow stop.

The flash exposure which is given as an auxiliary exposure to obtain a fine pinpoint dot in the shadow portions of the subject and also to increase opacity of each dot at its core without increasing the dot size or shape, by means of the light reflected from clean white paper or with flashing lamp attachments fitted with the camera, can be made at lens aperture of *f*.64 or *f*.90. The time of flashing is generally taken at about 10% of the detail exposure. But truly speaking, there is no definite rule for determining the flash exposure. In most cases it depends upon the nature of the copy to be photographed, the size of the dot desired and the photographic material employed.

Variety of Materials

Now, before we can give an idea about exposure timings it will be necessary to write a few words about the variety of photographic materials available on the market for this purpose. Photographic materials available on the market include products of Kodak, DuPont, Ansco, Haloid-Xerox and others. The photographic emulsion of the material most commonly used for making halftone negatives consists of Lith Type, orthochromatic. In our laboratory we have tried the products of all the four companies mentioned above and have found they produce negatives of excellent quality.

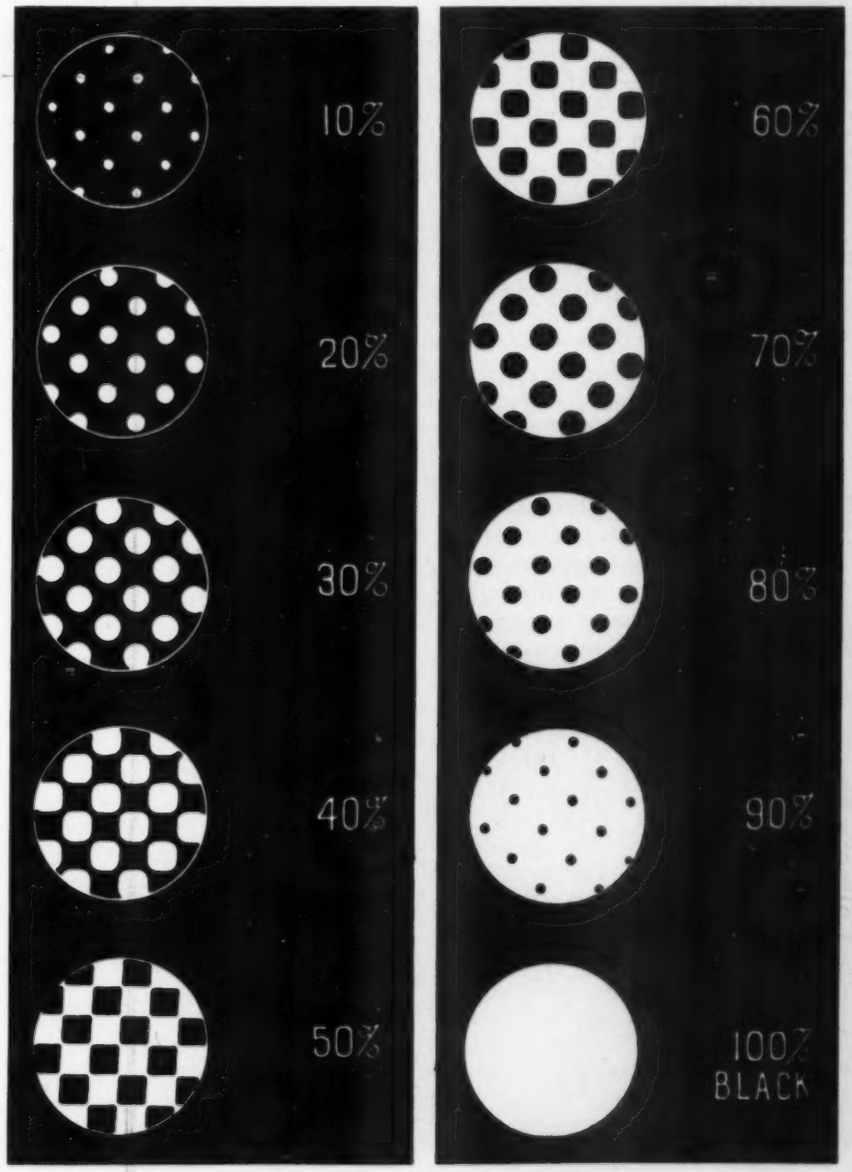
Determining Exposure Time

Turning towards the amount of exposure to be able to start work, we suggest the exposure procedure shown in Table VI. This exposure was found to be satisfactory in making fine quality halftone negatives from copy of average contrast in our laboratory. But it cannot be guaranteed to work the same for you due to variations in individual plant conditions. But it will serve as an excellent guide.

Development of Halftones

We must add that development of the halftone negative is also a serious matter. It is not just exposing the film and inserting it in the developing tray for a given time as is done in making a line negative. Development of the halftone negative has to be just right to produce the negative with required

Fig. 4.—This chart shows greatly enlarged different percentages of dot sizes. The effect is shown as in a negative.



contrast and hard dots of good density. For this reason, we list below, the most important points which one must bear in mind in developing the halftone negative.

(1) Paraformaldehyde hydroquinone developer should be used for developing halftone negatives. This developer comes under different trade names *e.g.*, Kodalith, Reprodol (Ansco), Grapho-lith (Hunt) and so on. These consist of two solutions, A and B.

(2) For use, solutions A and B are mixed in equal parts. It is important that one should mix them into required amount only a little while before the film is ready for development. Otherwise, the mixed solution will oxidize and will not be active enough to produce good results.

(3) Development carried at temperatures between 65 and 70 deg. F. produces the best negatives.

(4) As soon as the color of the mixed developer starts changing towards brown, it must be discarded and a new solution out of the stock solutions A and B should be mixed again. Generally, the mix lasts for developing two to three negatives.

(5) Halftone negatives are developed with continuous agitation for 2 to 2½ min.

Inspection of Halftone Negatives

Precisely what should an operator look for in the halftone negative he has made, to determine whether or not it is all right? This part of the work is the basis of the whole technique of halftone negative making. Otherwise, it is difficult for an operator to make a negative without knowing as to what he is after.

To make this explanation as clear as possible, we have prepared the chart shown in Fig. 4. This chart shows an enlarged section of different percentages of dot sizes as they will look in the negative. These percentages range from 10% to 100%. As this chart (Fig. 4) shows the negative effect, the white dots or the transparent area will print or carry the ink during printing. So where the transparent dot size is only 10%, less ink will print. Where the transparent dot size is 100%, the solids will print. To avoid confusion, technically the 10% dot area is known as highlight area, and the 100% dot area is known as the shadow area.

Negative-Copy Comparison

Now if you have followed so far, the rest is very simple. Place the copy and the negative in front of you. With the help of a pocket magnifying glass look for 10% dots in the highlight areas of the copy in the negative. Also look for 90% dots in the shadow areas of the copy in the negative. If dots in both the areas are similar to those shown in the chart, then it means that the negative is OK. If not, then it means that either your exposure or development has not been correct. Generally it is the exposure. Although the only way to examine a negative and to determine what is wrong comes to you by years of practical experience, it is difficult to lay down here all the information in a few words. Therefore, we just give a thumbrule. If you find the 10% and 90% dots bigger than the required, then an increase in the exposure time is required. If you find these dots smaller than required, it needs a decrease in the exposure time. In most cases, when a correction is needed only in shadow area dots, this can be done by either increasing or decreasing the flash exposure only and not changing the detail exposure.

An easy method for determining if the negative is satisfactory is to attach a gray scale to the copy. Percentages of dots are read in the top

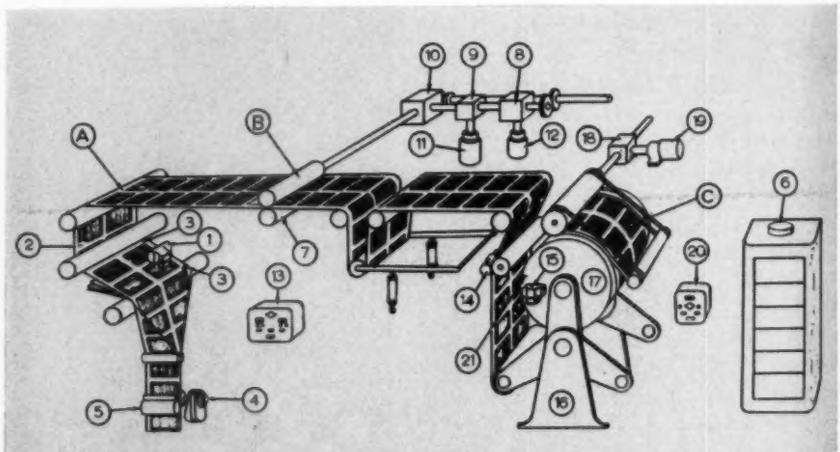
(*Continued on Page* 53)

Applies Color Inserts Automatically

Pre-printed color inserts produced by letterpress, rotogravure or offset printing processes, may now be inserted automatically in newspapers at normal press running speeds. Announcement has been made by Crosfield Electronics, Inc. Inserting is done at the press folder from the pre-printed roll.

The system will feed a pre-printed web into the rotary press folder simultaneously with the folding of the newspaper; or the web may be fed directly into a press unit for the addition of local editorial features or advertising.

A major problem in inserting pre-printed color webs is that under



Component Parts of Crosfield Inserter—Pre-printed web A is feeding into folder. Web speed is controlled by draw rollers B. Sponsor states print register is maintained within ±1/16 in. Pre-printed roll C web is pasted to web of expiring roll with accuracy of ¾ in.

1. Web inserter scanning head
2. Pre-printed web
3. Register marks
4. Motorized magnetic switch
5. Folder and cutoff mechanism
6. Control cubicle
7. Draw rollers
8. PIV gearbox
9. Differential gearbox
10. Differential gearbox
11. Motor for positional control of inserter
12. Motor for speed control of inserter
13. Control panel for inserter
14. Paster scanning head
15. Paster scanning head
16. Reelstand
17. New pre-printed reel
18. Differential gearbox
19. Corrector motor for paster register
20. Control panel for paster
21. Registering tape for new reel

best conditions errors exist between the press page lengths and the pre-printed web. Since these errors are cumulative, the error increases in proportion.

The Crosfield inserter is claimed to compensate for inherent errors in the page lengths and also for the transient errors which develop due to changes in web tension or other variables.

The inserter consists of an electric eye system which scans the web and compares a register mark with a timer attached to the folder. The information on inherent error is translated through a variable speed gear box and a set of differential gears to a pair of draw rollers (7 in the diagram) which control the infeed of the web into the press. The transient errors are translated through another set of differential gears into further adjustments on the same set of draw rollers.

Draw Rollers Keep Register

It is also stated that the control system working through photoelectric scanners slows down or accelerates the pair of draw rollers (7 in diagram) to maintain the print in register to 1/16 in.

It is reported the equipment will control the pasting operation automatically so that a new roll is pasted in register with the web of the expiring roll. Two paster controls are required for the two scanning heads —one to scan register marks on the web from the outgoing pre-printed roll, and another to time similar register marks on the pre-printed roll about to be pasted. A system of differential gears adjusts the rolls until the cutoff points coincide and brings them into identical speed. The paste may then be made at the desired instant.

The flying paster operation in which the new roll web is joined to the expiring roll web is better than ¾ in.

In summarizing, Crosfield states: (1) Pre-printed color pages are printed and re-reeled on the press; (2) The roll is rewound on a simple rewinding machine and any faulty sections are then removed and the rolls are made up to right diameter; (3) The roll is mounted on an auxiliary reel near the newspaper press folder and led into the folder with the webs from the newspaper press units; (4) The pre-printed roll is fed into the folder through a pair of draw rollers which speed up or slow down automatically so as to maintain the print in register with the fold; (5) When the flying paster splices a new pre-printed roll to the old roll, an automatic control insures that the paste will be in register. Circle No. 265 on Reader Service Card.

Bottom Wrapper and Bundler Feeder

A bottom wrapper feeder and tying machine feeder, said to automatically produce up to 26 newspaper bundles per min., has been announced by Wiretyer Corporation. The unit may be used with any tying machine to produce wrapped and tied bundles. Wiretyer describes the operation as follows:

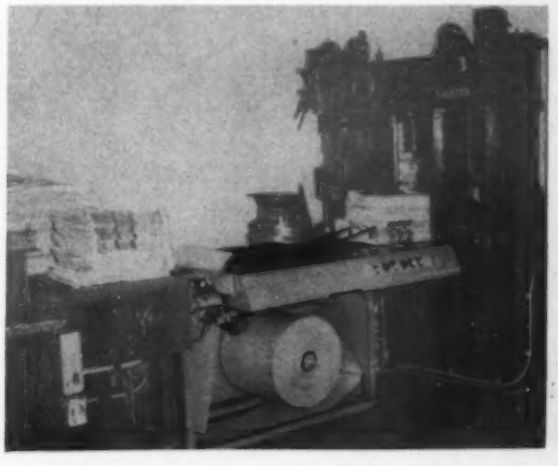
A bundle spacer unit meters the flow of a stack of newspapers as it prepares to enter the wrapper-feeder section. The squeezing action of the unit acts to side align the loose stack of newspapers. A photo cell sensing element serves to initiate the action causing alignment of the stack for proper entry onto the wrapper feeder and pusher and the tying machine itself. Under high speed conditions, the squeezing is electrically controlled by the pusher unit which meters the stacks into the wrapper-feeder and pusher to obtain maximum production. This device can also be used to accumulate bundles on the conveyor by holding the clamp position on one stack with the conveyor continuing to run.

In operation, the leading edge of the bundle starts the first switch. The gate is momentarily closed to hold back the following bundle. The bottom wrapper, which projects through a slot in the table top, is picked up by and located beneath the stack. As the leading edge of the bundle operates the second switch, the kraft underwrapper is severed from the supply roll. The wrapper may use a 20 in. diam. of kraft paper.

After cut off, the wrapper edge is projected through the slot, ready for the next cycle. In the event of a mis-operation, both wrapper feeder and tying machine automatically shut down, preventing any bundles from being produced without an underwrapper.

The tying machine feeder or bundle pusher is designed to position a stack of newspapers in the tying machine and start the machine cycle. The feeder is an in-line unit and does not need to move the bundle at right angles, claims Wiretyer. It may be set to operate for either single or double ties per bundle. Spring loaded pusher arms engage the rear of the bundle and ease it into the tying machine. This action starts the tying machine cycle automatically without disturbing the stack. The tied bundle is ejected from the tying machine by the entry of the next bundle.

Underwrapper feeder and tying machine feeder may be installed separately as individual units. Circle No. 278 on Reader Service Card.



Wiretyer's new bottom wrapper feeder and tying machine feeder may be used with any tying machine to produce wrapped and tied newspaper bundles. It is reported to produce up to 26 newspaper bundles per min. Bottom wrapper and tying machine feeder may be installed as individual units.

Platemaking conversion done by repro proof line shot blowup, by rescreening, or Brightype method.

Fig. 1.—Here is depicted an area from magazine reproduction proof in same size.

You can accomplish

CONVERSION

Work by three methods

By ADAM HENRI REISER, *Eastern Editor*

IT IS understandable that with the increased use of color in newspapers, advertisers are making fuller direct production use of advertisements in color appearing in magazines and other media. This is especially true if a piece has shown its value in pulling power and recognized quality.

The advertising pieces are blown up (each color enlarged separately) and converted to full or section pages of newspapers. The colors originally used in the production of the ad are duplicated.

Similarly, reproductions of magazine four-color pieces are used for posters, 35 in. by 45 in. posters being produced from a 9 in. by 12 in. page.

Conversion is the common term used to describe the transformation of originals used for one size or purpose to another.

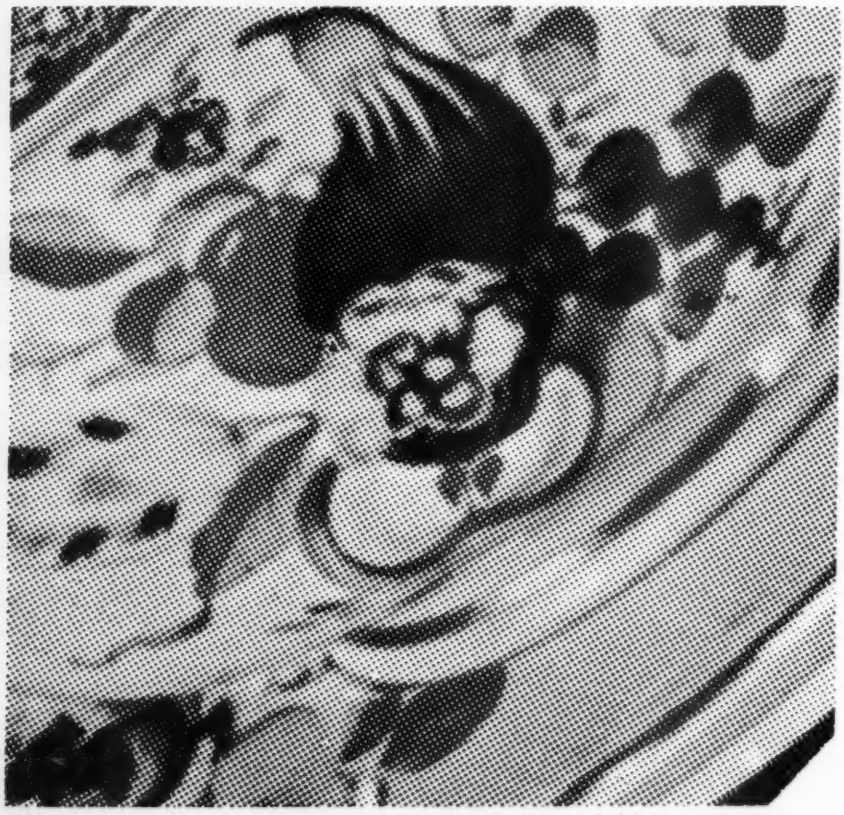


Fig. 2.—This is the same area shown in Fig. 1 as it appears in enlarged form on the poster.

Three Principal Methods

In the main, three methods are used to produce these conversions. (1) The most common form is that of line shot blowup of reproduction proofs pulled from plates or cuts of the original run. (2) This method calls for rescreening the proofs, shooting through the screen used in the process while making the negatives the required size and in the required screen ruling. (3) This makes use of the plates, preparing them for shooting directly by means of a recently introduced method.

With the "one best way of doing the one best thing" being an accepted scientific management principle, why this choice of three? The answer is simple. Each method is best for a specific purpose.

In the older lithography, the conversion principle was common practice. In drug or cigar label work and for stationery work, the old time hand artist and engraver on stone made use of the principle extensively. The same label design might be used for various size pill boxes, the heading on a prescription pad, and perhaps even for stationery by converting the original to the various sizes.

Later, in photo-litho, long before the introduction of the three and four color process, litho artists corrected continuous tone color separations of one medium sized subject

in the range of the three or four sizes desired. These corrected negatives or positives were then blown up or reduced to the final desired size, through a screen at the proper angle for the color represented by the shot.

If the conversion is to take place from a continuous tone subject (without screen) then all the sizes made from that negative or positive through a 150 line screen, for example, will all have that same ruling — 150 lines to the inch (whether the size is 2 in. or 12 in.). Many other examples may be cited.

However, strictly speaking, I suppose these are not conversions in the true sense, although the idea of making use of work already performed and converting it to desired sizes is common to both methods. There is, too, the similarity in changing size and screening which

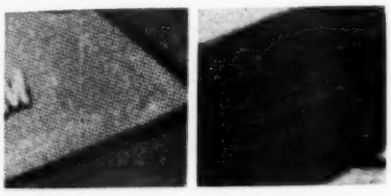


Fig. 3.—Two segments from a four color reproduction as originally printed before enlargement.

is found in the above as well as in the second method listed.

So you see the practice of converting is not a recent innovation. Its application to newspaper work, however, in full color is a comparatively recent thing.

Line Shots Can Contain Halftone Dots

Three or four colors are used, depending upon the subject and the original color combination, among other things. Reproduction proofs of these colors, taken from the original plates will, of course, include the screen. That's why enlargements are made directly from repro proofs

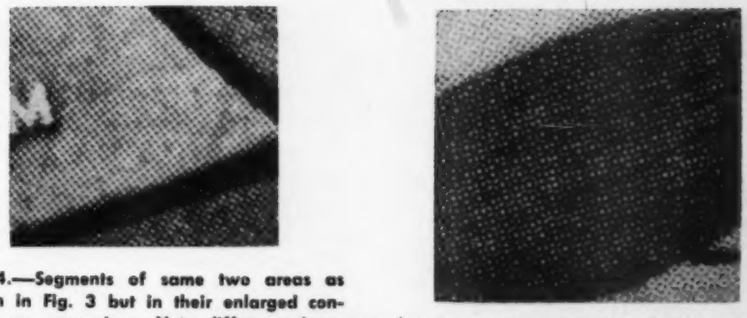


Fig. 4.—Segments of same two areas as shown in Fig. 3 but in their enlarged condition as conversions. Note difference in screen dot size as compared with those in Fig. 3. The original is approx. 120 screen while the blowups shown here are about 60 line screen.

in the first conversion method.

The actual shot of each color in this case is considered a line shot, there being no interposition of a screen in shooting the negative since the screen is already included in the cut. Exposing and developing the negative requires meticulous and careful attention to detail on the part of the photographer to insure retaining the dots in their respective values. Failure to maintain correct values will result in upsetting the color balance of the final print.

Where the repro proofs are unsatisfactory or where there are none, the plates are proved on semi-coated stock, each color being pulled in black ink. Fidelity of tone must be retained in the proofs, because the final press plates can never be any better than the original proofs.

In the *first* method mentioned above, when the repro proof of the plate, already including these screen dots is enlarged, the size of each dot is enlarged correspondingly. Thus, if the original screen was 120 line (roughly 120 lines to the inch) and an inch of picture was enlarged to 2 in., then there will be 60 lines to the inch in the final. Also, each dot now will be about twice its original size and thus will appear quite large.

One drawback lies in this method, for at times the makeready on the press on the original run may change the values considerably in the press run from what they appear on the repro proofs, and consequently on the final enlarged size.

In lithography the screen dot resulting from enlarging or reducing a screened repro makes little material difference, offset presses running the range from 300 line screened subjects to the very coarse 60 line screen just as easily.

Second Method

However, where a particular process (as in newspaper printing) requires a definite screen, the final subject size is only one of the factors that bear consideration. If the nature of reduction or enlargement in the line shot fails to yield the desired screen measurement (let's say 60 line screen if it is newspaper work), then rescreening must be resorted to. Or, if the customer objects to the rough appearance of the larger dots, thus making a finer screen desirable in the final, then rescreening is also in order. This is listed under our second method.

Rescreening often introduces a problem of moire or pattern objectionable to the eye, and for that reason it is rarely relished. Various dodges are used by the camera operator to ease the incidences of objectionable pattern or moire. A difference of screen angle from 15 to 30 deg. different from that of the screen angle on the repro proof will eliminate a serious pattern.

Some cameramen rotate the screen

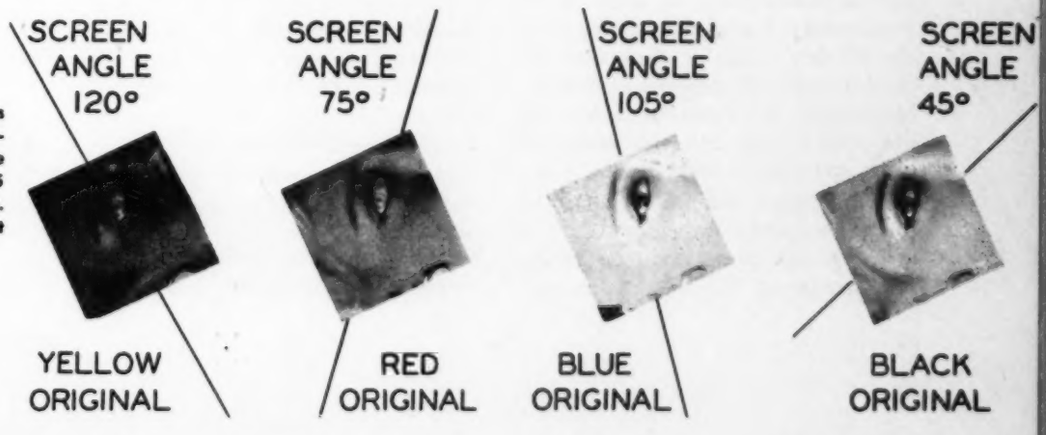


Fig. 5.—Similar sections of the four colors of an original reproduction proof. Halftone screen is 133. The color angles are as follows: Yellow, 120 deg.; red, 75 deg.; blue, 105 deg., and black, 45 deg. See conversion enlargement, Fig. 6, next page.

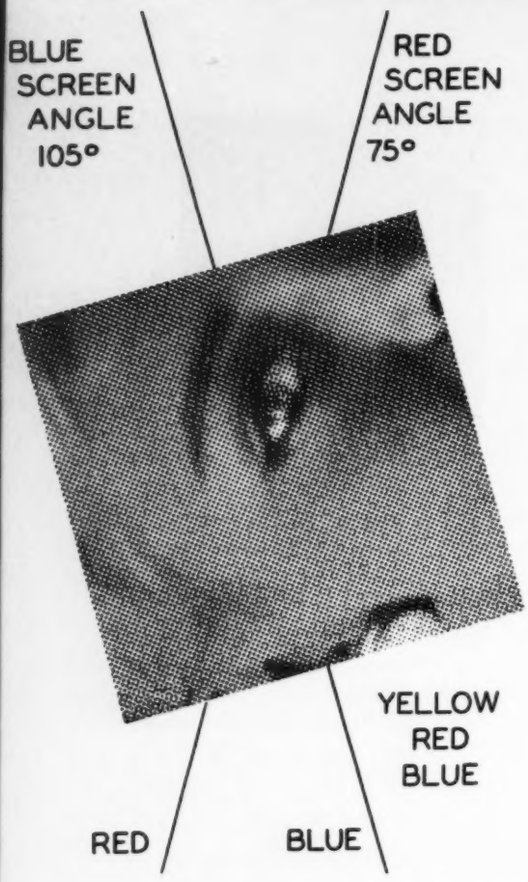


Fig. 6.—Same area as shown in Fig. 5 but enlarged by conversion with the dots now approx. 60 line screen with the angles as before. This is a straightline blowup by the No. 1 method of conversion as discussed in this article. Also, this is a composite of the first three colors—yellow, red and blue.

slightly in one direction or the other to minimize the objectionable pattern in the negative. Some throw the original slightly out of focus to fog the original screen formation. When time permits, the repro dot area is airbrushed slightly before photography.

Screen Angles are Important

When the original proofs show conventional screen angles with the black screen angle at 45 deg., the red at 75 deg., and the blue at 105 deg., some change these to the black at 75; the red at 105, and the blue at 45 deg. in the rescreening process.

The yellow may be either in a benday tint or a spatter tint or even the 90 deg. angle as they were in the original and retained in the enlargement, deviation from the 30 deg. rule having little serious effect in the printing of the yellow.

In review, emphasis must be placed on the screen function in printing. As is known, the screen dots break up the subject to give the illusion of tones. This is done by different size dots in the subject in each color printed, the larger dots being present where that color in the design is quite strong, while the smaller or finer dots are found where the shade is light. Since each color will have the same order of dots, some of which repeat in the different colors, the screen dots of the different colors are given an angle accepted throughout the industry. This places the dots of color assemblage in the familiar rosette pattern which presents the least objectionable design to the eye. If the angles are changed, or the dots imposed over each other in any departure from the conventional manner, then lines, moire or pattern may show in the complete print.

Rescreening not only involves additional time spent in the photographic operation but also in additional artist's work to eliminate screen where none is needed and to retain line lettering where it is apt to become screened through the rescreening process.

Third Method

In Method No. 3 use is made of some such device as the Brightype camera made by the Ludlow Typograph Co. This was described and illustrated on pages 52-53, Sept. 1958 issue of PRINTING PRODUCTION. In this method, the plate or form is prepared in a special manner and a positive is made from it, enlargement taking place from this exposure. Report has it that the positive thus made is of better quality than the repro proof made from the same plate.

$20 Million Yearly for Printing Schools

In a preliminary report on the survey of schools teaching Graphic Arts in the United States being conducted by the Education Council of the Graphic Arts industry, Managing Director Samuel M. Burt of the Council made some comment.

The preliminary report, states Burt, points up the huge monetary stake of the Graphic Arts industry in what goes on in education.

A random sampling of 170 replies out of 200 questionnaires shows that the estimated value of Graphic Arts supplies purchased annually by schools will have a total estimated value of $257,195. In 115 replies out of 200 questionnaires, the estimated value of printing equipment to be purchased in the next five years is $899,800.

$3 Million in Supplies

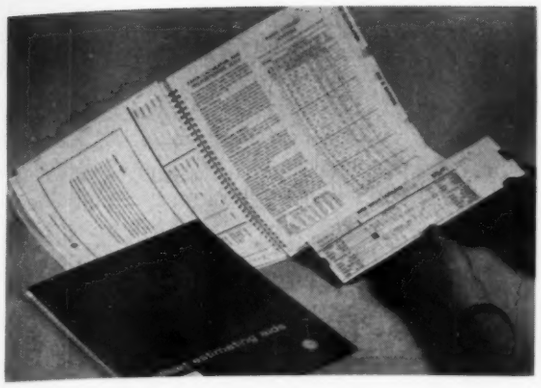
Burt reports that while it is not feasible to attempt to project the average figure per school over the approx. 3000 schools teaching Graphic Arts courses, nevertheless, on the basis of the over 1500 questionnaires received and some educated guesses, it may be said that schools purchase over $3 million worth of Graphic Arts supplies per year. In the next five years these schools will purchase over $10 million worth of equipment.

A complete analysis of the survey will reveal types of equipment and supplies used by major printing processes, number of students enrolled by type of school, and courses offered, as well as a directory of schools teaching Graphic Arts courses. This will be a useful source of information under one cover.

The money expended by schools for Graphic Arts supplies and equipment, observes Burt, is actually the smallest part of monies used in Graphic Arts education. The major expenditure is for teacher salaries. The minimum estimate for this expenditure throughout the country is $15 million per year. Thus the total expenditures for salaries, supplies and equipment per year in Graphic Arts education in the schools reaches the staggering sum of at least $20 million per year.

Manpower Needs in Printing

Burt asserted that best official estimates of the printing industry's manpower needs indicate that at least 10,000 new people per year must be hired for the next eight years, simply for replacement purposes alone.



Offset Estimating Aids, **a manual in which basic tools needed for accurate and quick estimates of the cost of an offset printed job are assembled, has been published by Kimberly-Clark Corp. The book includes a slide rule paper weight calculator-proportioner (shown here) and is available from Kimberly-Clark paper distributors.**

Manual Helps Estimating Offset Jobs

Production workers concerned with estimating offset printed jobs have been provided a valuable tool by Kimberly-Clark Corp. which has issued as a service to printers a combination manual and workbook entitled *Offset Estimating Aids.*

The manual contains a comprehensive compilation of practical estimating information for application in the lithographic field or in combination letterpress-offset plants. It is expected to be particularly useful to the smaller and medium size printing companies still building a backlog of records and experience, and to printers newly expanding into the offset field.

Offset Estimating Aids is available to printers from Kimberly-Clark paper distributors. The 10 in. by 12 in. manual is bound in a Texoprint cover and tab-cut for ready reference. In it are assembled the basic tools necessary for accurate and quick estimates of the cost of each offset printed job. It was prepared for K-C by a nationally known estimating specialist.

Included in the 12 page book are paper and bindery spoilage charts, a pad of press sheet layout forms, a slide rule paper weight calculator-proportioner, and base charts for offset plate and material requirements for outside plant purchases.

A full-page erasable acetate sheet, frosted on one side and clear on the other, is bound into the book as an overlay to the plate and plant cost charts. This is designed so that job figures can be entered into the book in the proper spaces on the charts and erased when changes are needed.

Information for figuring ink coverage and a chart on ink costs, including washups, are provided. Also included are detailed charts on binding operations such as folding, cutting, trimming, stitching (including saddle stitching), round and slot-hole perforating, punching and tab-cutting. Diagrams of 45 principal machine folds—up to 80 pages—also are shown.

The book is not a price-fixing text, Kimberly-Clark notes, for the charts are devised to enable estimators to figure cost differentials for their own areas.

GPI Begins Reorganization Program for Eastern Plants

General Printing Ink Co., Div. Sun Chemical Corp., has started a broad scale reorganization program for its eastern ink manufacturing plants, J. S. Thome, vice president, Sun Chemical, and general manager of the Graphic Arts Group, announced recently. The program is the first phase of a nationwide reorganization plan for GPI plants and facilities.

The current move is designed to provide improved service for eastern and midwestern area customers by making the company's products and technicians more readily available to them. Sales territories are being realigned and new plants opened in order to bring suppliers and customers closer together, reports Sun Chemical. A major step in the company's revamped setup will integrate management and operations of Bensing Bros. & Deeney companies with GPI.

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GTA Film on Rotogravure

Filming has begun on Gravure Technical Assoc.'s first informational motion picture on the rotogravure printing process and its uses, Leonard S. Pinover, chairman of the film committee, announced recently. The 28 min. color sound production entitled *Key to Merchandising* is being produced by United States Productions, Inc. in association with Film Counselors, Inc. It is expected the film will be ready for showing at GTA's Tenth Anniversary Convention in Chicago, Mar. 4-6.

Engraving-Offset

(Continued from Page 48)

and bottom steps of the gray scale in the negative.

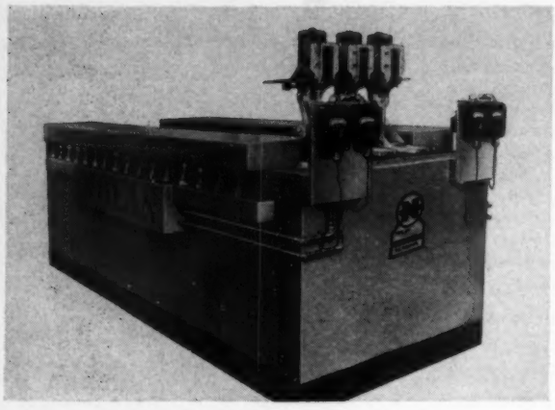
Letterpress-Offset Dot Comparison

While doing all this it is important to remember that these percentages of dots are only for negatives to be reproduced for offset printing. Negatives to be reproduced for letterpress printing on plates etched by conventional acid method require slightly different percentages of dots.

In halftone negatives for letterpress platemaking by the conventional acid etch methods, it is necessary to make some allowance for acid reduction of halftone dot size. They are prepared in such a way that when printed on metal they produce checkerboard formation in the highlights and pinpoint dots in the shadows. In other words, in the negative the highlight dot percentage is somewhere between 20 to 30%, and the shadow dot percentage is somewhere between 95 to 98%.

Halftone negatives which are to be used for making engravings by the powderless etching process are more or less made of the same dot size as in offset-lithography.

In Part III the technique of making halftones with various types of contact screens will be discussed.



View of master pot which will supply molten metal automatically to each of three 10 T. stereo plate casting pots at Boston *Herald-Traveler.*

Master Pot Supplies Metal To Stereo Plate Casting Pots

By FRANK DASSORI, *Business Manager, Boston* Herald-Traveler*

I WILL preface my remarks by saying that the mechanical people in our company are following developments in plastic plate making, the work that is being done in direct printing and the elimination of some of the roadblocks in the path of high speed offset printing. Yet we feel that because the problems that face us are here now and the innovations mentioned above have not been developed to the stage that would permit us to adopt ony one of them and apply it at this stage of development, we are going into our master pot remelt system. Newspapers are more inclined to continue to use the equipment in which they have capital investments rather than to grasp the first innovation straw of new development that waves in the breeze.

The idea of a central remelt or master pot is not new. Such installations have been discussed by mechanical people in newspapers for many years and considerable thought has been given the idea.

During the past three years four newspapers decided to do something about making such installations. Of the four papers that decided to install the system, the New York *Times* and the Boston *Herald-Traveler,* decided on the same method. The other two, the Buffalo (N. Y.) *Evening News* and the Miami (Fla.) *News,* each made different methods approaches.

In Buffalo the master pot is gas heated; the casting pots are heated electrically. The complete installation is on one floor. Gravity flow supplies metal to the casting pots from the master remelt pot.

In Miami the master remelt pot is one floor below the stereotype foundry and the metal is pumped up to the casting pots. This is an all-electric installation. In Boston we have adopted features of each installation.

Our project was first discussed in meetings with our stereotyping superintendent and our building consultants at which time we agreed to the basic concept of the installation.

Later, meetings with representatives of both the gas and electric companies supplied us with information from which we were able to make a decision as to the heating method.

More meetings followed with various equipment manufacturers to consider methods and price. A Nolan Corporation installation was chosen. At these meetings our stereo plate supply requirements were outlined and the basic concept refined and detailed.

Following is a brief summary of the electrical equipment specified for the master remelt pot.

The equipment consists of 32 Wiegand cast iron immersion heaters, rated at 480 v., 17.5 k. w. each.

The new casting pot is supplied with 12 similar immersion heaters.

Four cubicles supply power to the heaters in the master pot. There are, of course, eight heaters connected to each cubicle. Each of the cubicles is individually wired and powered so that the loss of power from one will not halt the remelting operation.

The contactors included in each cubicle are equipped with time delay relays that have a setting range of from 1 to 180 sec. so that the electrical load may be sequenced over as long a period as 12 min. to avoid peak electrical demands. The entire success of the system depends on this. Remelt capacity will be 14 plates per min.

This pot, which had been a 20 T. pot originally, is now a 28 T. capacity pot.

The problem was to find an economical way to operate a master pot remelt system that would enable us to cast a better plate without incurring too high an electrical cost for keeping the extra tons of metal in a molten state.

Avoids Peak Demand

As we are bringing 13,800 V. into the building and transforming it down to required voltages, savings could be realized if peak electrical demand periods were avoided. Therefore, the number of plates required to equip 42 units was multiplied by 45, representing pounds per plate. This indicated a basic metal requirement of 15 T.

To take care of emergencies, 50% additional metal was added to enable us to replace half of the original plates without remelting until all these plates had been cast.

As an added safeguard an addition was made to our electrical equipment that would stop the remelt cycle if enough presses were in operation to cause an approach to peak electrical demand.

While we talk now of eventual 42 press units and of providing equipment to supply these units once and a half times with plates without remelting, we will have only 30 of these units as the initial press installation. Therefore, the initial demand for stereotyping metal for

*Address presented before Great Lakes Mechanical Conference, Detroit, January 1959.

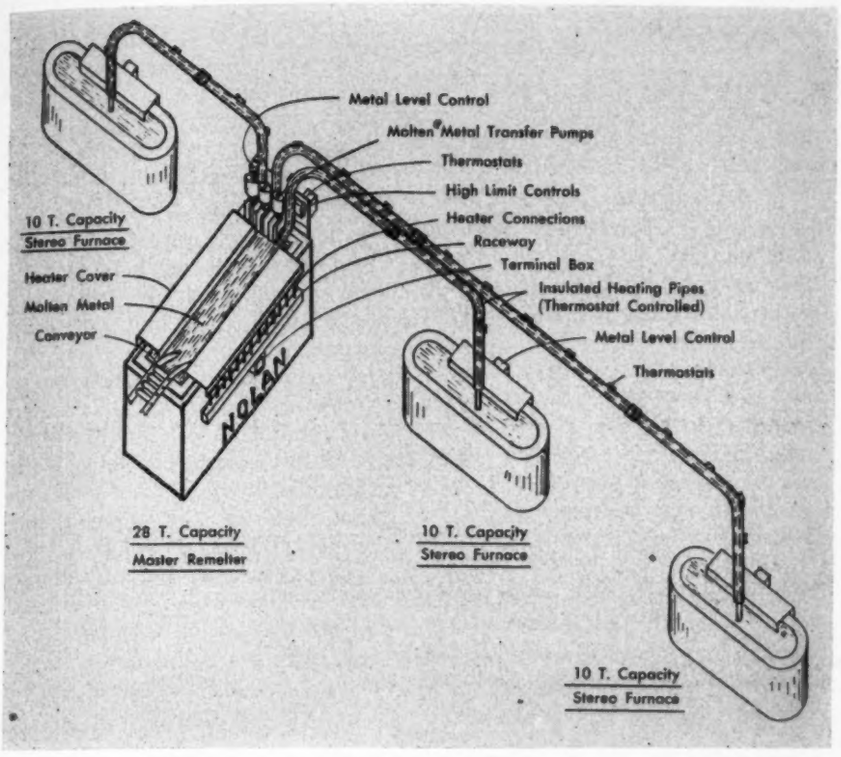


Diagram shows arrangement of principal parts of stereo metal supply system to be installed in Boston *Herald-Traveler* plant. Master pot supplies metal to three plate casting pots.

plating 30 units completely, and replating 50% without remelting, will be less than 17 T., which, with the addition of metal to cover the heating elements, would enable us to operate with 20 T. of metal in the master pot.

Increases Metal Capacity

The number of tons of metal in a molten state will be increased from 20 to a maximum 58 T. Where we now have two 10 T. casting pots in our present building, there will be three in the new building plus the master pot.

The cost of electricity for the maintenance of temperature in the casting pots should be small. The remelting equipment in these pots will be used chiefly to replace the heat lost due to normal radiation losses.

If radiation replacement losses are negligible, the entire operation should not cost much more than our present system. While this might seem unusual it must be remembered that in our present operation we often remelt while presses are operating and, in doing so, incur the higher demand charges.

We are aware that many competent stereotypers disagree with our thinking on this subject and with our attempt to solve some of our problems with it. However, we are greatly encouraged by the interest shown in it by others—even those who disagree—and by the fact that three such prominent papers as those mentioned above decided to install similar systems.

I am sure that we will modify the original concept of the installation after time and use show up the weak points. However, we do feel that the plan has merit that will become evident once it is operating efficiently.

Offset Press Packing

(Continued from Page 31)

parallel with the cylinder. This new instrument has a wide hollow base with tapered edges. It wobbles if it is on the cylinder out of parallel. It can be placed on the cylinder very close to parallel by moving the ends back and forth until it becomes solid and wobble free. To check and adjust for exact parallel, the bar and micrometer dial is zeroed. Then the bar is slid out onto the cylinder. Any increasing difference in the micrometer reading when it is close to the base and as it is slid out to its fully extended position shows a slight out-of-parallel condition that is easily corrected.

As a final check for absolute parallel, zero the micrometer when it is on the left side of the base support and then reverse the bar so that the micrometer is on the right side. Absolute parallel is indicated when the right and left side readings are identical.

Helpful Hints for Pressmen

In making these fine adjustments, it helps to powder the blanket or to have a piece of thin hard paper between the blanket and the magnetic base of the instrument. These reduce the friction between the rubber and the steel base and permit it to be slid or moved more easily and smoothly.

It is also a good idea to go through these paralleling operations on the plate cylinder to calibrate a new instrument.

This new design of instrument eliminates all previous objections to the packing gauge. Its use, and especially in conjunction with the LTF Blanket Thickness Gauge, should eliminate guesswork and permit a precision job of plate and blanket packing.

The LTF Blanket Thickness Gauge is available from a number of litho suppliers. Information on the new Colight Packing Gauge may be obtained by circling No. 273 on Reader Service Card.

Honorary Membership—Karl H. Wagner, general manager, Wagners Printers, Davenport, Ia., was recently presented a certificate of membership and a gold key by Beta Alpha Gamma, honorary management engineering society, at the 82nd Annual Meeting of Graphic Arts Industry, Inc. Pictured, left to right, are, Birger Swenson, second vice president, GAI, and general manager, Augustana Book Concern, Rock Island, Ill.; Wagner, and Clinton E. Johnston, president, GAI, and business manager, Beloit (Wis.) *Daily News*.

Composing Room Costs Too High? Administrative Errors May Be Cause

THE last and final session at the Great Lakes Mechanical Conference, Detroit, in January, was devoted to the newspaper composing room. Chairman of the meeting was Charles L. Buttermore, mechanical superintendent, Forest City Pub. Co., Cleveland. Co-chairman was Warren Stremming, night composing room foreman, Des Moines (Ia.) *Register* and *Tribune*.

The first speaker to be introduced was Edward H. Owen, editor, PRINTING PRODUCTION. His topic was *Typo Gremlins in Your Plant*. Through the use of slides, Owen showed many examples of errors which have appeared in newspapers and magazines, booklets and other communication means. While all of the gremlins appealed to the newspaper executives' sense of humor, some of them no doubt caused near-tragic results. At the end of the discussion, one oral comment was: "Some of those gremlins seem awfully familiar."

New System for Handling Photocomposition

Vernon R. Spitaleri, executive vice president of Sta-Hi Corporation spoke briefly on a new system for handling photocomposition in the composing room. He was frank to say that the system had not yet been fully developed. It is being designed for handling both hot metal and photocomposed forms. The biggest production savings occur after type has been reproduced on paper or on film. When photocomposition winds up in the form in the shape of 16 ga. engravings there will be much less metal weight to handle in getting the forms to the stereotype department. By the system he envisions 16 ga. engravings will be fastened to light weight base with sticky-back. A full page will weigh approx. 3 lbs. This will be accomplished by placing the 16 ga. form elements in pans with 3/16 in. register pins and holes. The pan containing the form can be placed on a sub-base at the mat roller.

In his address, Warren Stremming said: "Those responsible for the operation of composing rooms are repeatedly reminded of page costs and linage records. We are judged primarily on a dollar and cents basis. When we are found guilty, a large amount of the damaging evidence is a product of our own nearsightedness. In substance, we furnish the powers that be with facts that will be used against us. I am not going to encourage the 'falsifying' of production records. The phony records I speak of are based upon the unit time card system. This system in itself is a good barometer of production and will also give you an accurate picture of the flow of work in your department and will cause inefficiency to stand out like a sore thumb. The fault lies in the method the individual printer uses to fill out the card, especially for ad composition.

"These are the records that are to be compiled each day to be distributed to the various newspaper executives for study regarding page cost and production achievement.

"In short, our costs do not reflect a true picture because we receive only that which the printer gives us. We are being charged for time which is not composing room work. By inaccurate cards we are absorbing costs that belong to editorial, stereotype and engraving departments. Possibly reconstruction time is being charged to new composition and vice versa. What about extra proofs? Is ad service paying for them?"

Importance of Time Cards

Continuing, Stremming said: "The unit time card system is fine . . . but are we making the most of it? Would occasional reminders help employees to be careful about the importance of keeping cards correctly? Would it help to have the supervisor of each department check the individual's time card at the end of the shift to see that it is as nearly correct as possible? The size and shape of the time cards have a bearing on their use.

"If we were going to purchase new saws, how much influence on the purchase would price alone have? Would we buy a cheap saw just to save a buck? Before making a purchase it would be wise to check to see how many ads exceed the capabilities of this type of saw. A daily newspaper bought three short gauge models and two extension bars to split among them. When printers get to a saw there is no assurance that an extension bar will be there. The extension bars could not be adjusted to permit cutting a full column measure. So the machinists had to work on the extension bars."

Shortage of Matrices

Stremming related that a western daily was experiencing a terrific decline in machine production. There were changes in copy handling. This helped, but still did not solve the basic production problem. Every operator was at the keyboard, but the type was not arriving at the dump. In a sense, in this instance, the fault was management's. The answer was: "Put matrices in the magazine." The average number of matrices short in each magazine in this large daily was an astonishing 353. To complete the complement of matrices in the news and ad machines, in excess of 15,000 matrices were required. What was gained by running light? Nothing, except management kept replacement costs down temporarily.

Citing another instance of poor executive thinking he spoke of a paper that was plagued by late editions due primarily to old and worn headletter machines. He said: "The decision was made to purchase two new machines. But here is the ringer! The fonts that were previously run into the new machines were 11 years old, supplemented occasionally with new sorts. Now, one would think that with an investment of around $40,000 management would also buy new fonts to complement these headletter machines. In this case I do

More Next Month

Reports of the stereotype discussions held during the Great Lakes Mechanical Conference in Detroit will appear in the March issue of PRINTING PRODUCTION.

know that the economy axe was used to dig its own grave. By actual count the distributor stopped better than 500 times in the first 30 days of operation. That is twice an hour. Who can afford that kind of luxury in a modern plant?"

Finally, Stremming commented: "And, how about operator chairs? When chairs must be replaced we can't arbitrarily say we will purchase this or that type of chair and expect to please the operators. In one large daily, the superintendent figured he could anticipate the desires of his operators. He decided to replace the old chairs. Did he survey the operators to ascertain the type of chair they wanted? No. Those unpredictable linotype operators wanted chairs at about one-third the price of the finely upholstered chairs purchased by the superintendent."

Linofilm System and Display Composer

Application of Linofilm System in the Composing Room was the title of an address delivered by Herbert S. Rand, jr., Mergenthaler Linotype Co. Rand discussed the four machines employed in the Linofilm phototypesetting and composing system—keyboard, tape-operated reproducer, corrector and display composer. (See June 1958 issue, PRINTING PRODUCTION.) By means of slides he explained how the system works. The major part of his address, however, was devoted to showing examples of all types of display advertising, including complicated food store composition.

Among the 1000 Newspapermen Attending Great Lakes Conference

(All names read from left to right)

1—William G. Dorriss, mechanical superintendent, Des Moines (Ia.) *Register & Tribune;* Larry Nash, assistant to production manager, Cincinnati *Enquirer;* Stanley A Metza, Vandercook & Sons, Inc.; George Lowe, composing superintendent, Buffalo (N. Y.) *Evening News;* Carl P. Lawrence, composing superintendent, Des Moines *Register & Tribune.*

2—Donald Kahn, assistant to general manager, Philadelphia *Inquirer;* Bert Boucher, Mergenthaler Linotype Co.; Hill E. Hudson, engraving superintendent, Toronto (Can.) *Daily Star.*

3—Rollo S. Lewis, Morey Anderson, Alex MacLennan, and A. E. Williams, all of Beveridge Paper Co.

4—Earl Swinney, production manager, Waukegan (Ill.) *News-Sun;* Walter Phillips and Joe Goggin, Newspaper Publishers Supply Co.; L. W. Goldberg, United American Metals Co.

5—Edward H. Owen, editor, *Printing Production Magazine,* Cleveland; Herbert S. Rand, jr., Mergenthaler Linotype Co.; Warren Stremming, composing foreman, Des Moines (Ia.) *Register* and *Tribune;* Charles Buttermore, mechanical supt., Cleveland *Plain Dealer* and *News.*

6—Wm. E. Rudge, and Wm. Rudge, jr., and Fred M. Jernt, Rudge Associates, Inc.; Alex Posick, composing superintendent, George Bolton, head machinist, George Kunz, production manager, South Bend (Ind.) *Tribune.*

Pressroom Topics at Great Lakes Include Briefing on Research Program

DEVELOPMENTS in the newspaper pressroom field were reported at the Great Lakes Mechanical Conference in Detroit at a separate session which included a briefing on ANPA research activities. The meeting was conducted under the co-chairmanship of Robert Knight, pressroom superintendent, Indianapolis (Ind.) *Star* and *News*, and Robert Adams, pressroom superintendent, Canton (O.) *Repository*.

A program of solving newspaper production problems through research was described in a report by Frank Stanczak of the ANPA Research Laboratories, Easton, Pa. One phase of this program concerns newsprint on which Stanczak commented: "When a publisher buys newsprint today he does not know how the properties of this paper vary within a roll, between rolls, between shipments, or between mills or suppliers. Neither does he or the supplier know how each particular property affects operating costs in a pressroom or the quality of the printed page. The first step toward being able to accurately measure these properties and their effects has been taken by the ANPA Research Institute in establishing the newsprint quality control project."

Will Expand Testing

He said ANPA is expanding its testing to determine what characteristics of newsprint account for variation and printing quality. Time is coming, he added, when the newsprint mills should take this information, analyze it and study ways to improve the quality and uniformity of newsprint.

The Research Institute is now attempting to develop a test to measure the printing quality of inks at newspaper press speeds. If this test can be established, they will then compare the performance of inks on different kinds of newsprint at press speeds.

Stanczak said that since 1948 the cost per page per thousand eight-page papers has increased for most departments in most newspapers. He insisted that this increase in cost has not been offset by the improved machinery and processes made available in the last 10 years.

The speaker also touched upon some of the projects and results which the ANPA Research Institute has actively worked on in recent years. One of these, a system for measuring labor time that goes into composing local display ads, is now in use in 21 newspapers. As a result of research efforts in the engraving field, he reported there are now more than 100 newspaper installations using powderless etching procedures.

While acknowledging that stereotyping represents a small portion of the production dollar, Stanczak termed it important because it appears to be the key to printing quality. Stereotype operations have been selected for a major quality control study by ANPA.

Bottlenecks in Stereotype

He remarked: "In the area of costs and scheduling we have developed a relatively simple method which can be used by any newspaper to find the bottlenecks in their stereotype operation. This method enables the production department to determine whether use of a packless mat, more equipment, or different crew assignments may eliminate the bottleneck." This method is based on the assumption that the stereotype department can be considered a production line.

Using a theoretical newspaper plant as an example, the speaker explained that the bottleneck constricting the flow of mats through the stereo operation is the packing step. If the newspaper desires to increase its number of pages the packing table is the only one which needs speeding up. This can be done by assigning more packers to this area or by completely eliminating or reducing the amount of packing done.

He said that ANPA researchers have found that packing is a bottleneck in most plants. The speaker contended that the use of a packless mat eliminates the bottleneck and results in increased production capacity through the stereotype department.

He added: "The man hours saved on the packing table have been used to get flat casts and color plates out quicker, and in many cases reduced the overtime." As of August, 1958, he reported, there were 42 daily newspapers using a packless mat full time, 11 using it part time, and over 100 in the trial stage.

Unusual Press Installation

Engineering the installation of a four-unit Hoe Color Convertible press in the same location of the old press at the La Crosse (Wis.) *Tribune* without interruption of its production schedules was explained by Wallace Dombrow, R. Hoe & Co., Inc. The speaker narrated a film showing the various steps in this unusual machine installation procedure.

Dombrow explained that the *Tribune's* present plant was adequate for the foreseeable future and it was more desirable to locate the new press in the same location as the old machine. The first operation in installing the new press was to remove two of the old press units. A new foundation was prepared and two of the press units were installed in this space. After this equipment was running, the remaining two units and folder were removed and a new bed plate installed for the last two new units. The folder was moved approximately 50 in. to allow for the additional unit in front of the folder.

The complete four-unit press was running in 16 weeks or 85 working days and, according to Dombrow, only four of these days were on an overtime basis. He remarked that the *Tribune* was published every day of the week on time and only one edition was printed beforehand which was done at the time the folder was moved from its tem-

(*Continued on Page* 80)

ENGINEERING INTEGRITY

Refusal to compromise on small details results in Better Built Hoe Equipment . . . Our long years of pioneering, specialized engineering experience and meticulous attention to your production requirements, are your guarantee that the HOE equipment you get today will stand as a monument to your good judgment in the demanding years ahead.

Buying a newspaper press is probably the most important purchasing problem you'll ever face, and if you're concerned with the future of your paper, you'll welcome the certainty that you can't make a mistake when you purchase HOE machinery. Our superior engineering means improved performance and production . . . more important, it enables you to step up your operational profits in a matter of weeks.

We take pride in the fact that HOE machinery installed in 1959 will probably be running efficiently and profitably in the year 2009. Call your HOE representative, let him review your present problems, as well as your future production needs. He will give you valuable recommendations prepared by our staff of engineers . . . There is no charge for this service . . . Take advantage of it soon.

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Sales Offices: NEW YORK · BOSTON · CHICAGO · DALLAS · MIAMI · SAN FRANCISCO

For More Information Circle 87 on Reader Service Card

Engravers Told of Negative Color, Fast Etching and Good Machine Care

THE addresses and discussions at the Photoengraving Session of last month's Great Lakes Mechanical Conference in Detroit were "saturated" with speeded up processes intended to keep in tune with fast daily newspaper production.

Presiding over the meeting was Ernest Scherer, engraving superintendent, Detroit *News*. He was assisted by the co-chairman, John Dalton, engraving superintendent, the Indianapolis (Ind.) *Star* and *News*. Seated on the platform with the chairman were Robert Dumke, Milwaukee (Wis.) *Journal;* Paul Roache, photoengraving superintendent, Evansville (Ind.) *Courier* and *Press;* Frank Bonner, Atlantic Zinc Works; George Rothermel, Imperial Type Metal Co., Gerold Litschi, Master Sales and Service, Inc; W. S. (Bud) Coulson, Imperial Type Metal Co., Vic Chapiesky, Chemco Photoproducts Co., Inc.; and Wes Miller of Master Etching Machine Co.

Positive Side of Negative Color

Robert Dumke delivered one of the most fascinating addresses ever given before the Conference. The title of his address was *The Positive Side of Negative Color.* In attempting to report Dumke's address without accompanying color slides it will be somewhat difficult to pass along to the reader the importance of advancements in color photography for ROP color printing in newspapers.

Negative color can be shot in any camera having a color-corrected lens. Negative color is very reasonable with respect to cost and processing.

Dumke said the Milwaukee (Wis.) *Journal* decided to cover the entire 1958 World Series event in negative color film, almost all of which were 35 mm. size.

Negative color film offers the advantage of letting the photographer produce black and white prints directly from the negative color film. Another advantage is the even speed of reproduction from negative color film as compared to reproduction from the positive film.

Dumke related that at the end of the World Series approx. 1500 negative color films had been shot, almost all on 35 mm. These films cost approx. 10c per shot including developing. About $150 went for color material. If it had been possible to shoot all pictures on 4 x 5 transparencies, it would have cost about $1875 for the material and the *Journal* would not have had the advantage of being able to make fast black and white prints. The processing time for negative color after the film has been developed and selected is approx 1½ hrs. as compared to positive film of over 4 hrs.

Still another use mentioned is that it was decided to make negative color film from positive transparencies. From this negative color film the photographers could then make separation bromide prints on panchromatic paper in considerably less than it takes to separate a transparency.

After the negative color films have been dried and processed the editor selects from negatives the color pictures he wishes to run. The speaker commented that it is not a simple matter to judge negative color films. In the near future he

Pictured in Detroit at Great Lakes Conference
(All names read from left to right)

1—O. T. Cochran, Sta-Hi Corporation; Leo Oestreicher, stereo superintendent, Columbus (O.) *Dispatch*.

2—Wm. G. Dorriss, mechanical superintendent, Des Moines (Ia.) *Register & Tribune;* E. B. Flint, Flint Ink Corp.; Frank N. Moscher, operations director, Detroit *News*.

3—Stanley A. Metza, Vandercook & Sons, Inc.; Eric G. Ivany, composing foreman, Battle Creek (Mich.) *Enquirer & News*.

4—Al Nolan, Nolan Corp.; Oscar Wagner, business manager, Highland Park (Mich.) *Highland Parker;* Ralph H. Nolan, Nolan Corp.

hopes someone will develop for the *Journal* a TV aid that will enable the editor to see the negative film in positive form on a TV screen.

Dumke commented that due to the fact that "we have only one grade of panchromatic paper, the contrast range of the bromide prints leave something to be desired. To overcome this, we frequently put on a gray patch that matches the contrast range of the print. This is a guide for our engraving department to follow and enable the engravers to step up a reduced contrast as necessary."

Fast Etch at Evansville

Speaking on the subject: *What the Fast Etch Has Done at the Evansville (Ind.)* Courier *and* Press, Paul Roache related his experience with powderless etching when that method was installed in May, 1956.

He told of the somewhat involved experiences in making the fast etching method a success when powderless etching was first attempted in his plant.

Later on, Roache said: "With the introduction of Vitasolv and Micro-Mix used with Vitaplate and Micro-Metal, we got the situation well in hand and are now etching up to our highest expectations both in quality and quantity. With an etching time of 16 to 18 min., depending on the bath condition, we are getting a depth of 0.038 in. to 0.040 in. which requires no routing in the engraving department and the minimum amount of mat packing in the stereotype department."

Roache commented his force found that etching machines are not absolutely trouble-free. He said that a good checkup on the machines regularly is necessary.

"With the increase of engravings due to the introduction of photocomposition in our plant." Roache reported, "we have had to hire more help even though we do not use the powderless etch process. By comparing 1958 to 1955, we find the powderless etch process has enabled us to produce over three times the amount of work with less than twice the amount of labor. Again it must be pointed out that the type of work we are doing now would be more time consuming than the type of work we were doing in 1955. If our ratio of halftones to line etchings and combinations had been the same in 1955, as it was during the past year of 1958, we would have had to have more men at that time.

"The powderless etching method will not replace a skilled craftsman but it will enable him to turn out more work and better work under better working conditions."

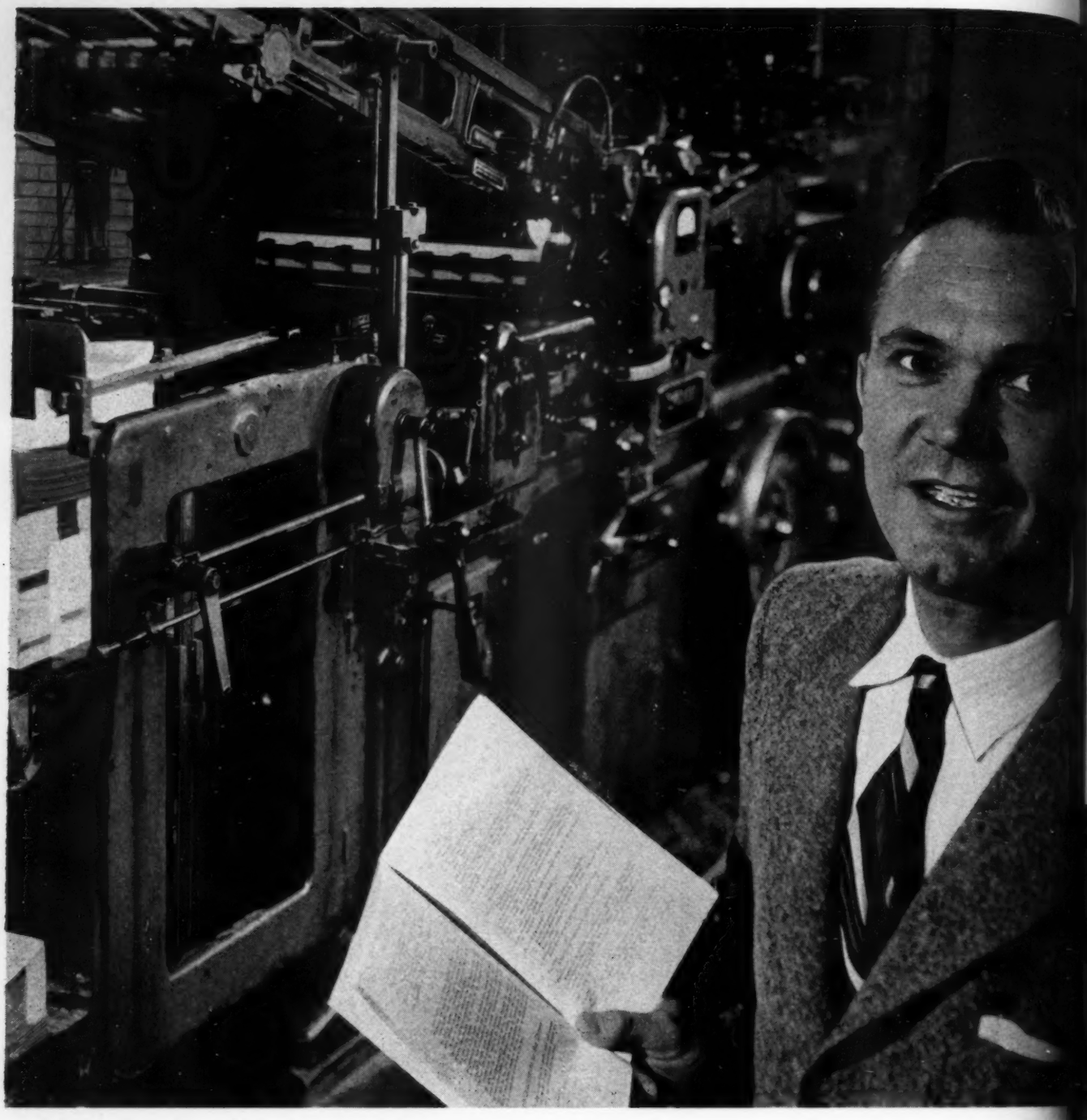
Fast Etching at Louisville

Unfortunately, C. L. Bronger, photoengraving superintendent of the Louisville (Ky.) *Courier Journal* and *Times*, could not be present to deliver his paper on *Dow Fast Etch Process*. His paper was read by the co-chairman, John Dalton.

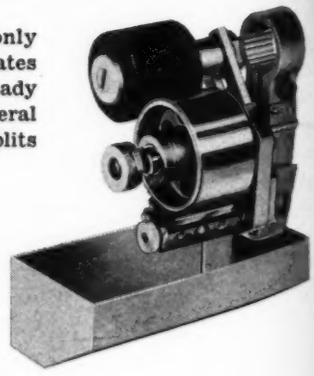
Bronger stated that copy coming into his plant consists of news cuts, editorial cuts, promotion, advertising and commercial cuts, and Photon cuts. For the Photon operation, he said, contact printers are used in the darkroom with nonstrip film. Usually 18 in. x 24 in. flats of the Photon type are made up, etching to a depth of 0.032 in. The work

(*Continued on Page* 83)

For More Information Circle 94 on Reader Service Card



THE DAYCO COLOR SEPARATOR (only mechanical color separator made) eliminates expensive roller-cutting, reduces make-ready time and press time. Lets you print several colors—one time through the press—with splits as narrow as 1½" and no color mixing.



DAYCO FOUNTAIN DIVIDERS are ideal for split color and all other fountain uses. Absolutely leakproof, quickly installed, they are easily adjusted and cleaned. Fully guaranteed.

For More Information Circle 48 on Reader Service Card

DAYCO ROLLERS SAVED $700.00 ON A PAIR OF MIEHLE PRESSES

"... that's only one example," states Mr. Lawrence J. Brink, Associate Professor of Printing at Western Michigan University, Kalamazoo, Michigan.

"Dayco Rollers last 4 times longer than competitive rollers and 16 times longer than ordinary rollers," states Professor Lawrence J. Brink who manages 13 presses at Western Michigan University.

SAVES $350.00. "We started out using winter and summer rollers on our Miehle Vertical V-50 Letterpress, but we were buying two sets of 'cold weather' and two sets of 'warm weather' rollers a year. With the service we've had from our one set of modern Dayco Rollers, we expect them to last at least 4 years . . . saving $350.00 on a single press. In addition, the press will run for weeks without resetting, where the rollers we once used required daily resetting due to extremes of temperature and humidity in this area."

SAVES $350.00. "Even when we paid a premium price, the rollers employed on our Miehle #29 never lasted more than a year. With Dayco Rollers lasting 4 years or more, we're saving another $350.00."

"We were always in trouble with the competitive rollers because they ran so hot they dried out the ink and it was necessary to wash up the press every 2 or 3 hours. Running 3500 sheets an hour, week in, week out, resetting results in costly downtime. So add that to the savings we made by switching to Dayco Rollers."

DAYCOS TAKE PUNISHMENT. "We use our pressroom as a 'lab' for training students in Printing Management. Being 'beginners,' they're bound to make mistakes a commercial shop couldn't tolerate. For instance, they tightened up some rollers to the point where the rollers melted from the friction. They make the same mistakes with Dayco Rollers but the Daycos bounce right back even after they've been run under too great tension."

"Daycos are the best all-around rollers we've ever used. And we run everything from newsprint to coated, bond, book, cover and index stocks in either black and white or up to 4 colors."

"Our primary purpose is to train men like Richard Hamelink in the skills of printing and printing management. New students will always make some mistakes, but Dayco Rollers can take the punishment and snap back."

Dayton Rubber

The Dayton Rubber Company, Dayton 1, Ohio
West Coast Distributors: Tillicum Rubber Company, Lacey, Washington;
Walter W. Lawrence Co., Inc., Los Angeles; George W. Shively Co., San Francisco

SEE GRAPHIC ARTS IN ACTION!
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Dayco Rollers . . . for Offset, Letterpress, Newspaper, Corrugated Boxboard, Gravure, Flexography, Coating, Graining, Steel Mills.
Dayco Offset Blankets, Dayco Fountain Dividers, Dayco Color Separators.

Problems of Small Dailies

(Continued from Page 35)

installed such departments.

A composing room supervisor in the audience said that dispatch departments serve as a collecting point for all material and copy. He said it saves time, especially when high salaried people are collecting this material.

It was generally agreed that dispatch department personnel should not be composed entirely of youngsters. Watkins maintained that the ideal dispatch staff should include a person from each of the editorial, advertising, and composing departments.

In the group meeting of the press and stereotype foremen, Stanley Amos, press-stereo foreman of the Lafayette (Ind.) *Journal* and *Courier*, presided as chairman.

Should Accept Packless Mat

The major part of the session was devoted to discussions related to the merit of the packless stereotype matrix. It seemed to be the consensus of the meeting that while packless mats do present a considerable number of manipulating and operating difficulties, yet at the same time the idea should be accepted and all executives should do everything in their power to help perfect them because of the improved printing which will result together with perhaps lower production cost.

An executive from one of the Great Lakes papers stated that when molding a 9 col. form he got 1/8 in. stretch. George Fuller, now consultant to the Cleveland *Press*, suggested perhaps the trouble was caused by not getting true rolling contact of the speed of the cylinder with the bed of the press during the molding operation.

The suggestion was made that instead of using a 1/4 in. cork in the molding combination that he try a 1/8 in. cork. Apparently, the molding combination did consist of a sheet of kraft, 1/4 in. cork, a creeper and fiber board. It was also suggested that the molding combination elements, particularly the cork, be placed in different positions with respect to the balance of the combination.

Royal Rager, stereotype superintendent of the South Bend (Ind.) *Tribune*, in speaking of the new type mat said that all newspaper mechanical and production executives should learn how to get along with it. He explained that at the *Tribune* 95% of the forms consist of locally photoengraved ads, but that some electrotypes and plastic plates are used. The packless type of mats have been in use at the *Tribune* for approx. 4 1/2 years.

Rager explained that patience and cooperation among the mechanical departments concerned is a prime requisite in developing maximum use of the mat. He said form tolerances are held in the composing room to get ±0.002 in. This would include not only the slugs but all plates and rules as well.

He explained that the rule is cast 0.9175 in. With respect to the molding impression no more pressure is used than with conventional mat molding. The pressure is determined when the molding pressure fractures the mat; the proper pressure is secured by dropping back until the proper depth of mold is secured for best printing results. Rager also said that some auxiliary or hand packing is done on the top and bottom and in some cases certain open areas in the interior area of the mat. He is securing 0.025 in. depth in the mat. In some instances, apparently, this depth is even greater.

Quadders, Saws Explained to Machinists

THE Machinists' Session at the Great Lakes Mechanical Conference, Statler Hotel, Detroit, in January, was devoted primarily to discussions of linecomposing machine quadders and Mohr saw mechanism improvements. The meeting was under joint chairmanship of Ted Gardiner, chief machinist, Indianapolis (Ind.) *Star* and *News*, and Ralph Elliott, chief machinist, Indianapolis (Ind.) *Times*. Speakers and panel members consisted of the following: J. G. McNutt, chief machinist, Detroit *News*; Carl Smith, ITU New Progress School, Indianapolis, Ind.; W. T. Christmann, service manager, Mohr Saw Co.; Walter Severin, Mid-Western service manager, Intertype Company; William Andreacci, service manager, Star Parts, Inc., and William Mulroy, manager sales and service, Mergenthaler Linotype Co.

Quadder Operation and Maintenance

The chairman stated that the purpose in inviting representatives of linecomposing machine quadder manufacturers to address the machinists was to help them understand construction, function and operation of each quadder. In this way, the machinists will be better able to maintain them in good operating condition. All three speakers illustrated their descriptions with slides.

Walter Severin discussed Intertype's Dual Duty quadder. As distinguished from the Single Duty quadder, the new development is automatic in operation with respect to a number of its functions. The quadder may be made inoperative for manual operation. It can be used either for manual or TTS operation. Through a memory unit as many as three matrix lines may be in process in the machine at the same time—one casting flush left, one waiting to be centered, and the third being assembled for flush right.

William Andreacci, service manager for Star Parts, Inc., described the Star Selectro-matic quadding attachment which may be applied to outstanding as well as new Intertypes and Linotypes. Some features of the Star quadder as illustrated and described by Andreacci are: Push button selector controls; automatic quadding of short lines; memory circuit for continuous operation (three lines may be "in the works" simultaneously); adaptation to Teletypesetter operation; electro pump stop safety for short matrix lines. Announcement was also made that Star Parts, Inc., will introduce an Economy Model quadder which will be manually operated.

(*Continued on Page* 85)

Eventually you'll buy a NOLAN *Metal Remelter*

here's why

SAVES SPACE! Nolan's complete, compact unit hugs wall... fits in corner... gives greater working area.

SAVES WORK! Loading is a "push button" operation with the Nolan Meltevator . . . and the Bottom Pouring Valve eliminates hand ladling.

SAVES TIME! Loading time is slashed 95% with the Nolan Meltevator . . . and the easy-to-use Pouring Valve cuts repigging time 50%.

SAVES METAL! Low cover-hood reduces metal oxidation . . . assures less dross, cleaner metal.

SAVES MONEY! From first installation cost right through your everyday operation, the Nolan Metal Remelter saves money for you . . . quickly pays for itself . . . and helps increase profits.

KEEP ROLLIN' BUY NOLAN

There's a Model "Tailor-Made" for You!

There is a Nolan Metal Remelter to meet your particular requirements exactly. Available for either Gas or Electric Heat... from 600 lbs. to 20-ton, or larger on special order. Write for brochure and complete information.

Get details now... you'll be glad you did!

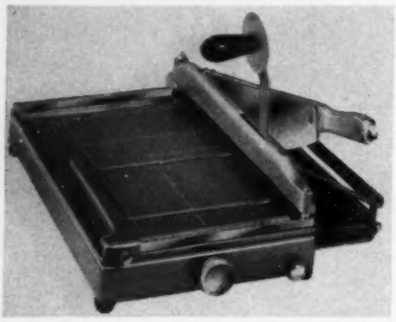
For More Information Circle 132 on Reader Service Card

EQUIPMENT & SUPPLIES

If you wish additional information concerning equipment, supplies, and/or technical literature, please make your request on *Printing Production's* Reader Service Card to be found in this issue.

Paper Cutter and Trimmer Introduced by Michael Lith Sales

A combination paper cutter and trimmer which can be used to cut up to 50 sheets of paper in one operation has been introduced by Michael Lith Sales Corp. Called Kutrimmer, unit is equipped with



the following devices: Measuring device for multiple cuts, front gauge with paper support for cutting single sheets, and a hand clamp which can be swung aside quickly when necessary for special cutting. Kutrimmer is available in three sizes, 14⅜ in., 22 in. and 38 in. Circle No. 252 on Reader Service Card.

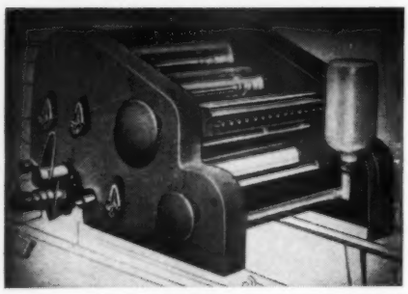
Cutter and Creaser Press Handles Large Sizes of Corrugated Board

The Model No. 50 cutter and creaser press for handling large sizes of corrugated board up to 80 in. by 52 in. has been announced by T. W. & C. B. Sheridan Co. The press has an operating speed of 3000 i.p.h. and the large sheet size capacity permits two up running of jobs. Included in the features are automatic feeding, horizontal platen action, and vibration free operation, states Sheridan. An automatic stacker delivery that collects and forwards a predetermined number of sheets to the strippers is said to be another feature of the press. Circle No. 262 on Reader Service Card.

Color Press Attachment for Multilith Enables Two-Color Runs

A color press attachment claimed to print two colors at one time on the 1250 Multilith with one impression from a single blanket has been devised by Townsend Industries, Inc. According to sponser, registration can be held good since both colors are registered on the same blanket prior to being transferred to the paper.

Known as the T-51 color press attachment, unit can be mounted on any standard 1250 Multilith in alignment and accurate adjustment without altering the 1250, states Townsend. Included in the features are: A micro adjustment for side movement of the cylinder for preventing

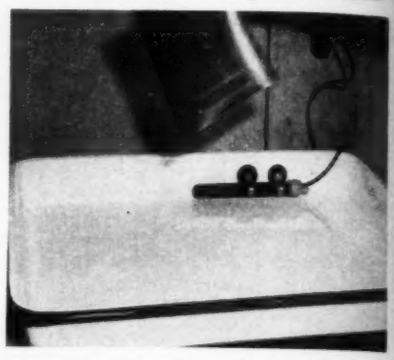


tracking to the blanket and for allowing hair line registration; transparent oscilators for fast clean up; removable etch fountain, and complete inking and dampening system with oversize oscillators for greater halftone and solid coverage.

When attached to a 1250 Multilith, unit can be run as a single color press, or both can be run together on two color work or form imprinting. It is said the T-51 can be quickly disengaged and the Multilith run alone. Circle No. 268.

Predetermined Temperature Maintained in Developing Liquid

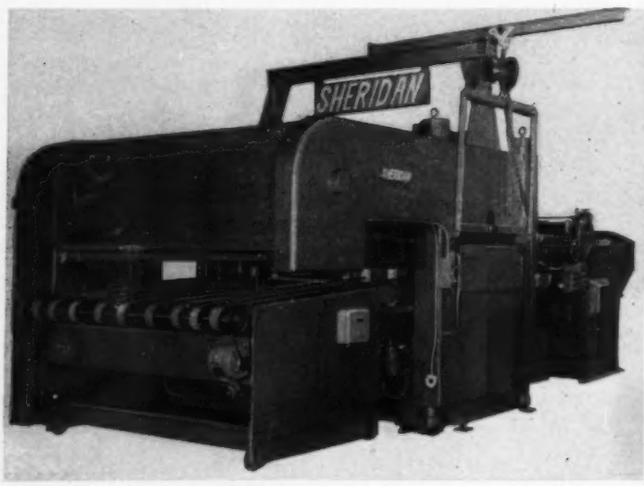
Eldorado Products Co., Inc. has announced a temperature control designed to maintain a predetermined temperature in any liquid or developer. Called Thermo-Trol, device is reported to main-



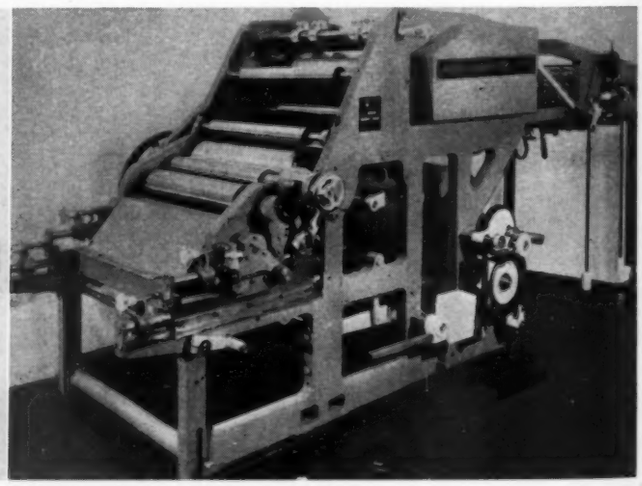
tain temperature accurately to within one degree. It measures 1 in. by 8 in. long and clips to the side of the developing tray. Once set device is reported to require no further attention. Circle No. 256 on Reader Service Card.

Flexographic Press Available In Custom Models by Hess & Barker

A flexographic press designed for up to 20,000 sheets per hr. operation was announced recently by Hess & Barker. The press takes a 22 in. max. web, has a cylinder circumference and cut off range from 10 in. to 20 in., and occupies a total floor area of 11 ft. 9 in. by 7 ft. 4 in. Custom models of the basic design can include any combinations of multicolor flexographic printing, overall embossing, perforating, and other paper converting operations. Circle No. 263.



T. W. & C. B. Sheridan Co.'s Model No. 50 cutter and creaser press is pictured at left. The first production model of the press, which handles corrugated board up to 80 in. by 52 in., has been installed at Hinde & Dauch Co., Cleveland.



Shown at right is the single color model flexographic press designed by Hess & Barker. Press is equipped with roll stand, enclosed flexographic unit with circulating ink pump, and overlapping type delivery with automatic receding pile.

For More Information Circle 205 on Reader Service Card→

LAWSON HYDRAULIC CLAMP CUTTERS

Smooth... not a ripple in the cut edge when you run your thumb along a lift cut on a new Lawson Hydraulic Clamp Cutter. *Here's why:*

Proven Hydraulic Superiority... holds lift firmly, yet gently. Won't mar top sheets or disturb alignment. Extra-capacity system guards against leakage, gives uniform clamping pressure throughout the busiest work day.

Long, Low Shear Angle... Knife glides swiftly, smoothly through lifts to 6½" high. Flat cutting angle reduces machine strain, meets less resistance from lift... keeps knife edge sharper much longer.

.002" Spacer Accuracy... Optional. Lawson's Electronic Spacer automatically positions lift with hairline precision.

Exclusive Two-End Knife Pull... New double crank design uses less linkage, pulls knife in direction of main drive. Less wear, greater efficiency, maximum dependability.

Three Point Knife Bar Support... Center bearing on knife bar combines with adjustable gibs at both ends to give rigid, three point support. Eliminates bowed or concave cuts.

Extra-heavy Construction... Thousands of pounds heavier than comparable sized cutters. Vibration-free operation. Rigid honeycombed table can't warp. Massive design clamp holds lift firmly throughout cutting cycle.

Thousands of growing, thriving plants depend on Lawson accuracy. Sizes from 39" through 69". Write, wire or phone today.

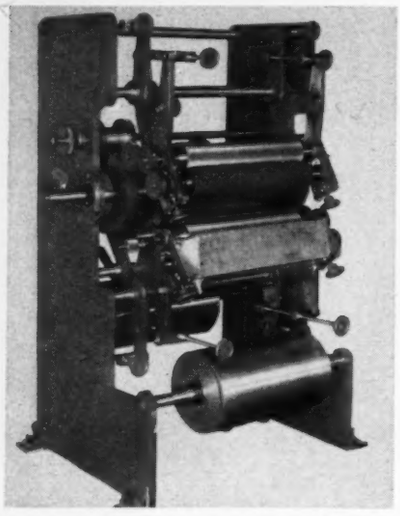
THE LAWSON COMPANY

Division of Miehle-Goss-Dexter, Inc. / Chicago 8, Illinois

OFFICES IN PRINCIPAL CITIES

Small Flexographic Press Announced by Paper Converting

A small size flexographic press has been announced by Paper Converting Machine Co. The press, Model 2637, prints two colors against a single impression cylinder at speeds of 500 to 600 ft. per min. It



has a repeat range of 8 in. to 16 in. Included in features are running circumferential and side register controls. Press's anti-friction construction is reported to assure free running whether used separately or in line with other equipment. Circle No. 258 on Reader Service Card.

American Type Founders Reports New Offset Perfector Press

The ATF-Solna 24 offset perfector press, which handles a sheet up to 18 in. by 24½ in. printed on both sides, is available from American Type Founders Co. The printing area is 17½ in. by 24⅜ in., permitting 8½ in. by 11 in. jobs to be run four up with full bleed, or 9 in. by 12 in. jobs four up. Said to be suitable for short run book work, sales literature, directories, etc., the Solna 24 will print one color on each side at rated speeds up to 6000 sheets per hr. Pile capacity on the Elless stream feeder with back separation is 31½ in.

Press prints blanket to blanket and both cylinders are equipped with grippers. The lower cylinder takes the sheet from the feeding table and transfers it to the upper blanket cylinder. When the grippers of the upper blanket cylinder have taken over the sheet, the impression starts. When finished, the sheet is given over to the grippers on a delivery drum. A deep pile chain delivery permits long runs before unloading, states sponser.

ATF-Solna 24 is equipped with 12 inking rollers in the upper system and 11 in the lower. Each system has two form rollers of different diameter. All steel rollers are copperplated. Dampening systems consist of five rollers each, three molleton covered and two chromed. Lubrication of main bearings is said to be automatic. Circle No. 267 on Reader Service Card.

Kodak Contrast Ortho Film Available on Polystyrene Base

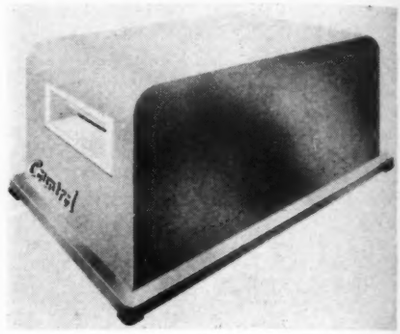
Kodak Contrast Process Ortho film is now available on Kodak's 0.010 in. polystyrene base. Said to be designed to provide a dimensionally stable material for preparation of Dultgen halftones in the gravure process, the film has been designated Kodak Contrast Process Ortho PB film. According to Kodak, the film provides a dimensionally stable support for halftone and continuous tone work when used with Kodak Commercial PB film. Kodak Contrast Process Ortho PB film is available from Kodak Graphic Arts dealers in sizes from 8 in. by 10 in. to 20 in. by 24 in.

Countrol Keystroke Counter For Type Composition

A system for automatically measuring machine composition has been developed by Frost Associates. The equipment consists of a counter cabinet attached at the right of the keyboard. Every keystroke made by the operator is individually counted by a pulsing method. This does not interefere with operation of the machine.

Sponsor states there is no mechanical or electrical connection to the keyboard and key touch remains unchanged. The count is obtained by an external pulse generating circuit which accumulates a total corresponding to the number of key depressions.

This is done through a micro-switch mounted below the distributor at the back of the machine. The micro-switch furnishes even and off times to the electro-mechanical printing counter at the



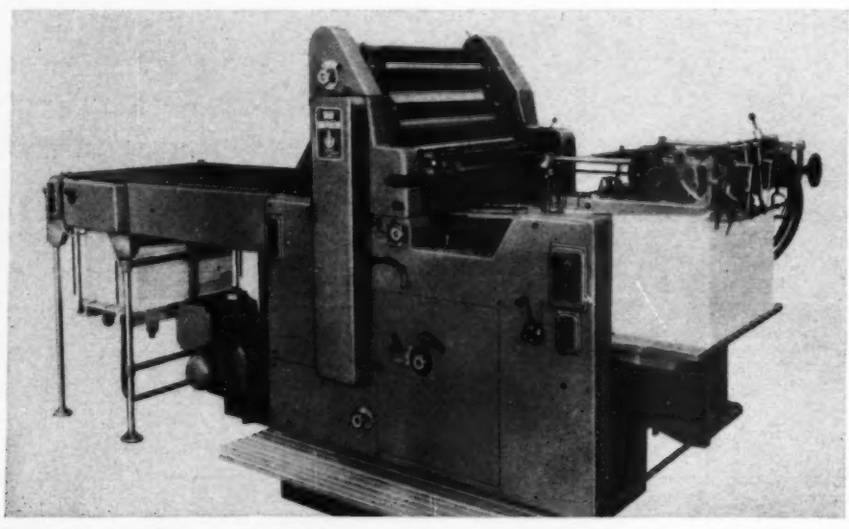
right of the keyboard. These pulses are fed to the counter only when one or more matrices are in the distributor. An electronic probe with relay device senses the presence of matrices in the distributor and closes the circuit to the counter. Thus the count corresponds to the total number of key depressions made by the operator.

At the completion of each job, the operator places his time card in the printing unit of the counter where the stored total of keystrokes is automatically printed. The counter immediately resets itself to zero and is ready for the next job or take.

Installation of the system on each machine is said to be a simple matter. Routine maintenance involves minor cleaning.

Operating speed is 400 counts per min. (or 24,000 per hr.). Power requirements are: 115 v., 60 cy., s.ph., 250 v.a.

Optional features are: Totalizer counter within the unit to aid in establishing maintenance schedules; machine designation codes that print the composing machine number with each keystroke total, and time and date stamps that print with each keystroke total. Circle No. 264 on Reader Service Card.



Pictured is the Solna 24 offset perfector press now being handled by American Type Founders Co. Press will take sheets up to 18 in. by 24½ in. and will print one color on each side at rated speds up to 6000 sheets per hr.

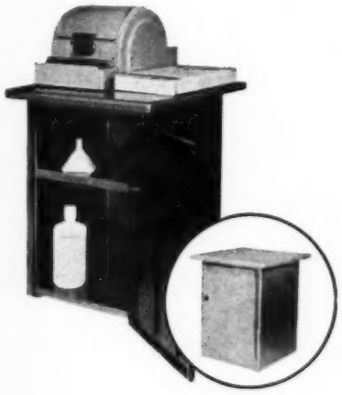
Darkroom Viewer Provides Flat Support for Examining Negatives

A negative holder and viewer which provides a flat transparent support for holding wet negatives for examination is being manufactured by Robert L. Yinger. It is claimed the equipment is designed to provide positive control of the halftone dot during processing and to provide a means for preventing streaks caused by holding the negative during development. Unit is positioned directly above the developing tray. It is constructed primarily of stainless steel and aluminum and is made to set on the top edge of a 20 in. by 24 in. developing tray. In the case of smaller trays, the viewer sets astraddle

the tray in the sink. The viewer is available with either clear or flashed opal glass. It will carry a negative 18 in. by 20 in. Larger films may be handled by permitting the ends to lap over the edge of the glass, reports Yinger. Circle No. 251 on Reader Service Card.

Duplicating Machine Cabinet Features Table Top Working Area

A metal cabinet sized to fit all types of photocopy and duplicating machines has been reported by Mim-E-O Stencil Files Co. Model 24VC features table top working area alongside the equipment and is equipped with an enclosed two deck storage compartment. Sponsor states the 24 in. work top area allows ample



space ahead of the duplicator for work being processed, as well as for a paper dispenser. Working height is adjusted from 28½ in. to 30 in. Adjustable legs enable leveling on uneven floors. It is also claimed heavy gauge steel construction keeps the cabinet rigid, steady and vibration free under machines of any weight. Circle No. 254 on Reader Service Card.

Pipe Heating Unit Replaces Heat Lost in Transfer of Molten Metal

A pipe heating unit claimed to replace heat lost during transfer of molten metal or liquids through pipes up to 3 in. diam. has been announced by General Electric's Industrial Heating Department. The unit is reported to be useful where molten metal is transferred in central stereotype melting systems. The prefabricated pipe heating unit consists of a formed, steel sheathed tubular heater

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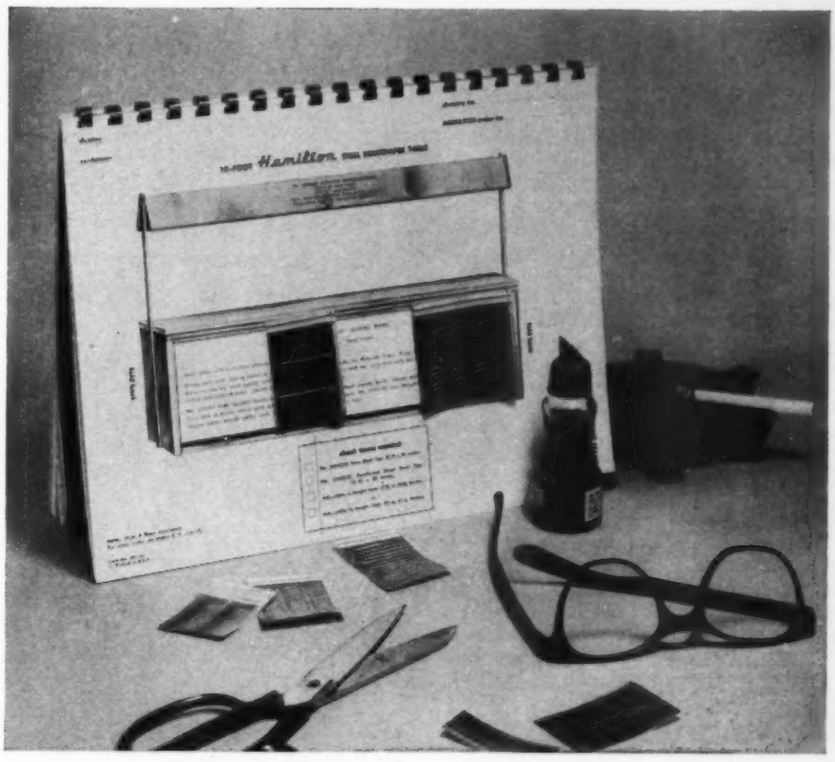

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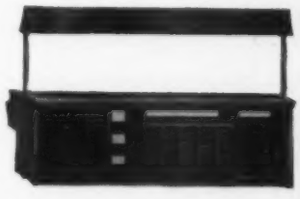
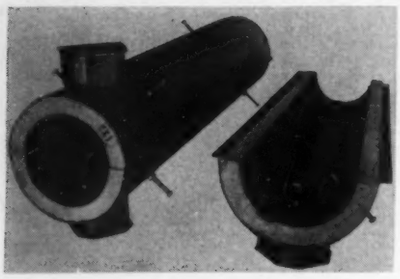


Printers equipment designed and crafted by

Hamilton

HAMILTON MANUFACTURING COMPANY • TWO RIVERS, WISCONSIN

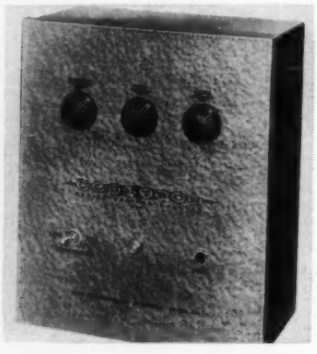
For More Information Circle 78 on Reader Service Card



rated 600 W., 120 V. or 240 V., and is mounted on an aluminized reflector 3 ft. long. Insulated with calcium silicate, the reflector is covered by an outer coating of sheet metal. A bimetallic thermostat is mounted between the tubular heater legs and wired in series with the unit. Range of the thermostat is from 0 deg. to 650 deg. F. It is furnished with screws adjustable to fit pipe up to 3½ in. (outside dimensions). Circle No. 257 on Reader Service Card.

Countron Pre-set Counter Introduced by Hobson Miller

Hobson Miller Machinery Corp. is offering a new Countron pre-determined counter, designed to handle counting and batching speeds up to 1000 impulses per min. Enclosed in a 16 ga. steel cabinet, it is available in three models for selecting counts from 1 to 100, 1 to 1000



(shown in accompanying picture), or 1 to 10,000.

There is automatic recycling to zero after each completed count cycle. Even though power is removed, the interrupted count will remain and resume from existing count when power is restored. A manual reset button permits resetting to zero without finishing out counts from previous operations. Unit can be mounted separately or in a control panel. Circle No. 271 on Reader Service Card.

Rapidex Front Seal Gum Available For High Speed Envelope Machines

Two formulations of Rapidex, a front seal gum for high speed machining conditions, are available from the Envelope & Gummed Paper Dept., Morningstar-Paisley, Inc. It is reported gum has good stability in the gum box and will flow to the rolls without pasting, even after days of agitation. Other characteristics are said to include layflatness and fast drying speed. One formulation, Fast-Dry, is recommended for use on high speed machines and conventional equipment. The other, Flat-Seal Rapidex, is recommended where humidity is low, where additional layflatiness is required and on equipment where speeds are not excessive. Circle No. 270 on Reader Service Card.

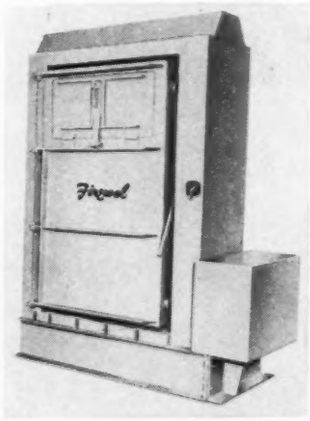
Self Tightening Core Chuck Prevents Loosening of Cores

A self tightening core chuck, which is used to prevent cores of web-fed materials from loosening or slipping, is available from Stanford Engineering Co. Two eccentric ribbed chucks slip into the ends of the web core against two eccentric

lock rings secured to the let off shaft. There are no threads. Stanford says holding action increases as tension on the core increases. A reverse twist releases the chuck and frees the core for the next roll. Circle No. 255 on Reader Service Card.

Automatic Power Baling Unit Introduced by Firewel Company

Firewel Company, Inc., has designed a new automatic baler unit which is reported to be small and compact in size. Wired for single phase 110 V. or triple phase 220 V. operation, unit can be plugged into a standard wall socket. It is equipped with a hopper door for easy filling of stringy material and also a flange formed door. A flip switch turns



on the unit for automatic baling. Bales 28 in. by 17 in. by 34 in., weighing from 175 lbs. to 250 lbs. depending on the material can be produced. Size of press is 21 in. by 54 in. with an overall height of 68 in. Circle No. 277 on Reader Service Card.

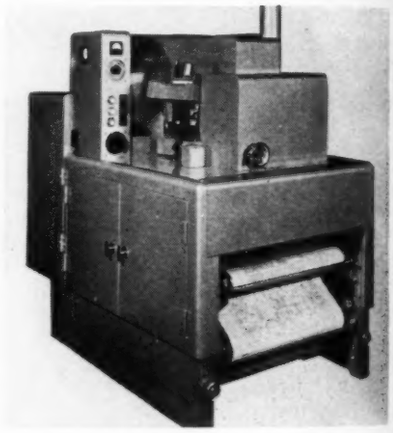
Elrod Bordering Attachment — Pate Company is now manufacturing a new bordering attachment for Elrod casters. Known as Bordamat, the device is used to tool fancy borders with standard molds on Elrods. It is reported a variety of designs can be produced. Circle No. 260 on Reader Service Card.

Ideal Lithographic Roller Made of Tough Synthetic Material

Ideal Roller & Mfg. Co. has introduced its Tantone lithographic roller, made of a tough synthetic rubber on which fast drying inks are reported to remain stable. That is, the inks will dry fast on paper but not on the new synthetic. Tantone rollers are available in all sizes. Features are said to include life expectancy up to 7 yrs., resistance to action of solvents, and ease of cleaning. Circle No. 269.

Unitized Microfilm Systems Applied to Copying Drawings

Unitized microfilm systems, in conjunction with xerography, have been applied to reproducing engineering draw-



ings by Haloid Xerox Inc. The systems have three basic steps: Copying of drawings onto microfilm; automatic mounting of processed microfilm frames into die-cut apertures of data-processing cards; and insertion of the cards into a Xerox Copyflo 24 Continuous Printer. Advantages cited include savings in file space, less time required, and savings in materials since plain paper is substituted for sensitized paper. Circle No. 276 on Reader Service Card.

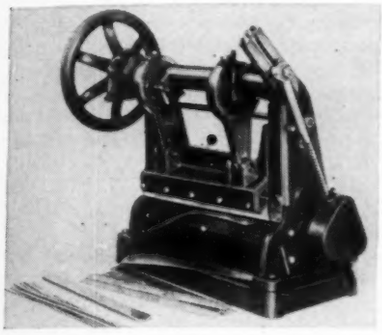
Vulcan Introduces Infrared Radiant Heaters

Vulcan Electric Co.'s new line of infrared radiant heaters is designed to provide uniform, intense radiation for drying applications, such as drying of inks. Units are rated from 600 to 1800 w. in lengths ranging from 24⅜ in. up to 46⅝ in. Sliding steel clamps can be

positioned anywhere along the heater length. Circle No. 274 on Reader Service Card.

Hobbs to Distribute Jaco Power Operated Guillotine

Hobbs Manufacturing Co. has announced its appointment as exclsive distributor of the Jaco Autogil, a heavy duty, automatic power operated guillotine. Autogil is designed to automatically measure,

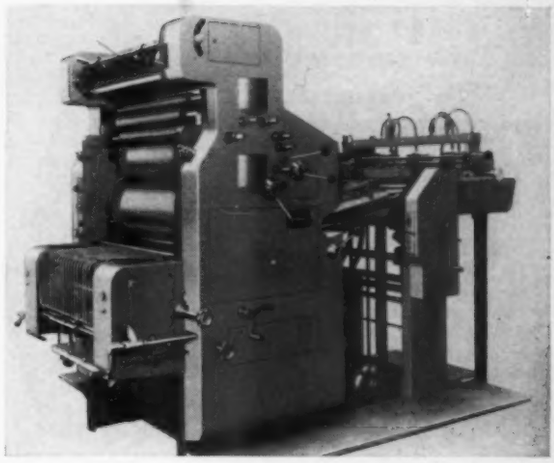


cut and count roll and coil stock to accurate lengths. Unit is available in two models. Model 5 is for materials up to 5 in. wdith and Model 15 for materials up to 15 in. width. Material can be cut to 3/16 in. thick. Machine enables production speeds from 120 cuts per min. Circle No. 275 on Reader Service Card.

Tarpley Off-center Router Bit Permits Unobstructed View of Work

A router bit recently announced by the Geo. Tarpley Co. permits the operator an unobstructed view of the work directly behind the tool by means of an off-center design. Tarpley has named it Clear-Vue router bit. Sponsor states the bits are ground all over to close tolerances. Shanks are centerless ground to assure no taper or slipping in the collet chuck. The bits are designed for use on all routing machines. Can be supplied with ¼ in. diam. or 5/16 in. diam. shank in four sizes, Style A, in ⅜ in., ½ in., ⅝ in. and ¾ in. Circle No. 250 on Reader Service Card.

New ATF Offset Press—



The Chief 126, a new sheet-fed offset press designed for speeds up to 8500 sheets per hour, has been introduced by American Type Founders Co. The press will take a sheet of 20 in. by 26 in., with a maximum printing area of 19⅝ in. by 25½ in. Stock range is said to be from 9 lb. onion skin to 0.030 in. card. Special features include a double-loading floor type feeder with a swing arm mechanism. Ink roller settings can be made from outside the press frame. Ink fountain with drop ink blade, sheet detectors, and suction slow-down at delivery are other features of the press. A delivery opening cam permits quick opening of delivery grippers to remove jammed sheets. Circle No. 272 on Reader Service Card.

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For More Information Circle 168 on Reader Service Card

PRINTING INDUSTRY PATENTS

Covering patents issued November 4, 11, 18 and 25.

All new patents for the printing industry are reported exclusively for PRINTING PRODUCTION by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. PRINTING PRODUCTION is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Composing Room:

DEVICE FOR TRIMMING SLUGS TO HEIGHT

Slugs may be trimmed to the exact height over their whole lengths by controlling the distance between the cutting tool and mold. This control can be affected by means of an electric field produced between the two, for example, by means of a capacitor field, or by optical and electrical means, such as selenium cells and by means of light-slit measurements. Patent 2,861,678 by Karl Debus, assigned to Linotype Gesellschaft mit beschrankter Haftung.

Platemaking:

LITHOGRAPHIC PRINTING PLATES

The plates can be produced photomechanically by using, as a light-sensitive layer on aluminum bases, S-alkyl-thiodiaryl-amine sulphonium perchlorates which are dissolved in a suitable solvent, such as ethylene glycol monomethyl ether. The plates are coated with the solution under subdued light and then dried. Patent 2,859,111 by Georg Werner, assigned to Azoplate Corporation.

LIGHT SENSITIVE COMPOUND FOR OFFSET PLATES

Light sensitive material for use in the manufacture of lithographic printing plates is prepared by diazotizing o-hydroxy-amino-quinoline bodies and submitting the diazonium salts thus obtained to the influence of alkaline agents. The compound may be used on metallic bases as well as glass, lithographic stone, aluminum foils, and parchment paper. Patent 2,859,112 by Oskar Sus and Martin Glos, assigned to Azoplate Corporation.

STEREO FINISHING MACHINE

The interior surface of a printing plate is finished into true cylindrical form and at the same time, axially spaced tension lockup pockets are cut in the under side of the plate adjacent its straight edges by this machine. The pockets are adapted to be engaged by the plate tensioning hooks of the type used on the plate cylinders of printing presses. The application for this patent is a division of that originally filed on patent 2,664,788. Patent 2,859,507 by Christopher V. Knell, assigned to Miehle-Goss-Dexter, Inc.

GRAINING ZINC OFFSET PLATES

A fine and reproducible uniform grain can be produced on zinc offset plates by treating a cold rolled alloy zinc plate with an aqueous solution comprising 1 to 5% sulfuric acid and 1 to 10% hydrogen peroxide by weight. The grain is produced by simple immersion of the plate into the solution at room temperature or slightly above for ½ to about 15 min. Patent 2,860,039 by Paul H. Margulies and Henry E. Winters, assigned to Food Machinery and Chemical Corp.

FEED REGULATOR FOR STEREOTYPE FINISHER

A stereotype plate to be shaved and finished is received on a cylindrical core which carries a stop to hold up travel of the plate into the machine until the machine elements are ready to operate on the plate. This prevents fouling of the machine and spoilage of the plate. Patent 2,860,401 by Robert W. O'Connor and Martin H. McNulty.

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- Lighting & Flooring
- Air Conditioning & Heating
- Building Materials
- Workflow Planning
- Department Locations

ADAPTING AND ALIGNING DEVICE

This device has been developed to be used to transfer an image from a paper support carrying an emulsion layer image (commonly referred to as a matrix sheet) to a flexible base lithographic plate. The device is in the form of an angular plate secured at one end to a photomechanical copier, the other end being disposed within the open end of a container which carries numerous receiving support sheets. Guides and stops are used to support and align the sheets, and rollers apply pressure near the bend in the angular plate to transfer the image. Patent 2,860,438 by Robert Gumbinner, assigned to Polychrome Corporation.

POLYMERS FOR REPRODUCTION OR RESIST IMAGES ON PLATES

These polymers, having increased light-sensitive properties, are useful for photochemical reproduction process or the production of resist images for printing plates. The polymers are characterized by containing, attached to a carbon of a polymer, recurring 3- or 4-(alpha-cyanocinnamido) phthalate units. The starting polymer may be resinous polyvinyl alcohol or a cellulose ether or ester. Patent 2,861,057 by Stewart H. Merrill and Donald A. Smith, assigned to Eastman Kodak Co.

LIGHT-SENSITIVE POLYMERS FOR MAKING PRINTING PLATES

In the preparation of resist images for printing plates, these polymers can be handled with alkaline solutions. They include vinyl cinnamate copolymers containing from 30 to 60 mol percent of recurring units having the formula $-CH_2-CH-CO-CH=CH-C_6H_5$ and from 70 to 40 mol percent of recurring units having the formula $-CH_2-CH-O-CO-(CH_2)_2-COOH$. Patent 2,861,058 by Cornelius C. Unruh, Gerhard W. Leubner, and Albert C. Smith, Jr., assigned to Eastman Kodak Co.

ARYLGUANIDINE ARENEDIAZOSULFONATES

The products are suitable for use in lithography, i.e., in the manufacture of paper and metal lithographic plates. The salt products are made by preparing in a known manner the required alkali metal arenediazosulfonate and reacting the same in an aqueous medium with the selected arylguanidine arenediazosulfonates separate from the aqueous solution. The photosensitive solids which have a color ranging from yellow to orange, red or brown are insoluble in water but soluble in solvents such as isopropyl alcohol, acetone and chloroform. Patent 2,861,065 by Clifford E. Herrick, Jr., assigned to General Aniline & Film Corp.

POSITIONING MATRICES FOR TRIMMING OR CASTING

In making stereotype plates for cylindrical newspaper presses, the matrices can be positioned in less time by using matrices having a straight slit centrally located in each border part. The slits of the matrices

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Printing Executives Visit Miehle—Executives of the Democrat Printing Co., Madison, Wis., recently visited the Miehle plant in Chicago as part of an education program to keep up to date on pressroom and bindery developments. The group is pictured viewing the operation of a Miehle V-50 Vertical press.

are designed to register with segmental depressions in a curved matrix supporting plate. Patent 2,861,334 by Craig C. Baker and Leland H. Satre, assigned to Sta-Hi Corporation.

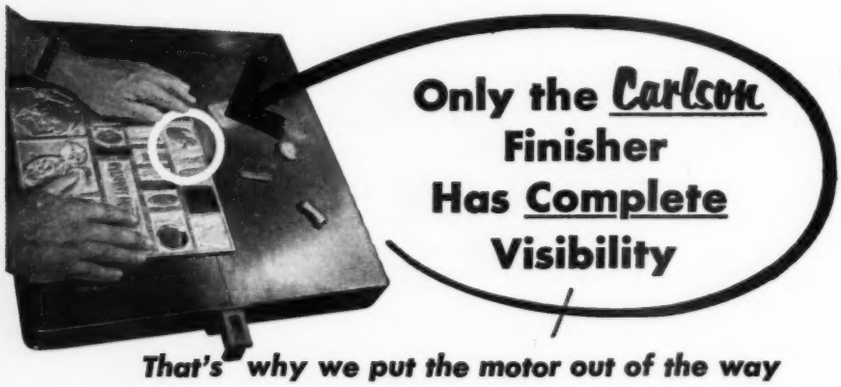
Printing Presses:

WEB PRINTING PRESSES

For maintaining control of a web between the units of an offset press in order to insure register, this press causes the web to wrap slightly around both of the blanket cylinders instead of passing through the printing couple in absolute tangency with the cylinders. In this way the web is still in contact with the blanket portion of the cylinders through a slight arc even though it spans the gaps of the two cylinders. Patent 2,859,691 by Franz Heller, assigned to American Type Founders Co., Inc.

SELECTIVE PRINTING APPARATUS

In apparatus of the type in which a printing form or duplicating master sheet is used, which sheet carries the text in the form of reproducible mirror-inverted copy from which the reproduction is effected on moistened sheets, all or selected portions of a printed form may be printed. This is accomplished by using a rotary support which revolves with the printing roll about an axis transverse to that of the printing roll, which rotary support carries numerous push button controls so that by the operation of the required button, a selected portion of a printing form can be printed. Patent 2,860,574 by Wilhelm Ritzerfeld and Gerhard Ritzerfeld.



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LINEUP AND REGISTER OF PLATES

The makeready time required for the preparation of a printing press of the letterpress and other similar types is greatly reduced by this method, which provides for positioning an indicator card upon a body having a surface similar to the printing plate holder. After photographing the indicator card, an image of the card is projected upon the surface of the body and a printing plate is placed upon the body so that the printing plate coincides with the projected image of the indicator card. All these operations can be effected without stopping the press. Patent 2,859,532 by Robert E. Fogg.

CYLINDER SEPARATING MECHANISM

This separator is applicable to a three-cylinder offset duplicator having a master or plate cylinder, a blanket or offset cylinder, and an impression cylinder. It is designed to separate the printing and impression cylinders when paper sheets fail to feed to the cylinder so as to prevent the application of printed matter to the impression cylinder. Patent 2,860,577 by Wallace R. Fowlie, assigned to A. B. Dick Co.

REGISTRATION MECHANISM FOR DUPLICATORS

For use with a three-cylinder offset printer utilizing the lithographic process, registration can be effected by an adjusting mechanism in which a slidable and rotatable wrench is adapted to extend through a locating aperture in a positioning member on the blanket cylinder of the press, so as to align the wrench with a rotatable adjusting member, while maintaining the blanket cylinder stationary. Patent 2,860,578 by John L. Tregay, assigned to A. B. Dick Co.

INK ROLLER MOUNTING

This roller mounting requires only simple boring and tapping of the frame and the use of a clamping screw to accomplish a rigid mounting for the inking roller. Such mounting is also easily and accurately adjustable. Patent 2,861,516 by Charles A. Harless, assigned to R. Hoe & Co., Inc.

INK ROLLER SOCKET

The socket permits precise proportioning of the forces exerted upon two cooperating ink cylinders. The socket arrangement includes individually adjustable springs for providing a normal spring mounting of the socket, especially during initial adjustment, but which permits the socket to be rigidly anchored to the press frame once the adjustment is complete. It may be mounted in non-symmetrical position and used on a newspaper press. Patent 2,860,579 by Wallace H. Granger, assigned to Miehle-Goss-Dexter, Inc.

PAPER GUIDE FOR PRESS

The guides are of the type used in presses of the Original Heidelberg types and are characterized by certain improvements which permit the printing or imprint made by the inked form to be

PATENT SEARCHES

For Patent Research in the U.S. Patent Office, or a prompt estimate on any type of search, write

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brought down further to the edge of paper sheets as supported by the guide. The guides will handle all kinds of papers, ranging from heavy card to onion skin. Patent 2,860,876 by Richard A. Conover.

PRINTING PLATE TENSION HOOK

The hook contains a floating type plate engaging jaw beveled on both sides and adapted for limited vertical movement. The jaw is capable of sufficient movement to permit its use in plate cylinders provided with helical grooving of slots varying in depth and it is also suitable, in view of its possibilities of vertical extension, to compensate for proper clearance with use in cylinders of different diameters. Patent 2,859,693 by Theodore R. Ziebell, assigned to The Cottrell Company.

Feeding, Folding, Delivery:

SHEET DELIVERY FOR ROTARY OFFSET PRESSES

To obviate the adherence of the leading edge of a sheet after it has been released by gripper fingers, kick-off elements act to complete the releasing action. Such kick-off elements include a set of spring fingers positioned to cooperate with and assist the gripper fingers. The application for this patent is a division of that originally filed on patent 2,821,911. Patent 2,859,692 by Luis Mestre, assigned to Lewfor Development Corp.

CONSTANT TENSION UNWINDING MECHANISM

The applications for the three patents are divisions of the application originally filed for patent 2,781,178. The present patents cover three versions of a mechanism for tensioning a web through a variable speed transmission responsive to a change in brake speed. An oil pump is used in each case because the pressure of same is always determinable for future precise settings. Patents 2,859,921, 2,859,922, and 2,859,923 by Richard Le B. Bowen.

SHEET FEEDING MECHANISM

This mechanism is of the type which uses suction and an air blast for separating individual sheets from a stack. All oscillating parts are back in feed position and the next sheet is separated ready to feed before the bottom sheet is out of the stack. Sheets can be fed end to end. This action gives slower arm movements than the average separator which has to come in and out between trailing edge of one sheet and the leading edge of next sheet. Patent 2,859,964 by Theodore F. Aronson and Floyd A. Lyon.

TABLE OR SKID LOWERING MECHANISM

For feeding stacked sheets to a printing press, this motorized lowering mechanism is controlled by a readily adjustable time delay relay. The relay is momentarily energized at predetermined intervals, say once each 50 sheets delivered. The amount of delay of the relay may be adjusted in exceedingly small increments, despite the very wide overall range of adjustment available. The adjustment is so fine that device can readily accommodate very thin sheets to very thick sheets, as well as an unintended and slight and otherwise unnoticed change in the thickness of the particular paper being printed. Patent 2,861,805 by Frederick G. Auer, assigned to Champlain Company, Inc.

WINDING MACHINE

The tension of a web is so controlled, when rewinding a roll of paper, that either soft-roll rewinding or hard-roll rewinding can be accomplished regardless of the type of paper being handled. The circuit and control mechanism may be either electrical or hydraulic. Patent 2,858,997 by Leonard Rockstrom, assigned to Cameron Machine Co.

DRYING MOVING WEBS

Printed webs are effectively dried by so directing the web that it is contacted across its entire width by a high velocity sheet of a gaseous fluid having a component opposed to the direction of travel of the web and simultaneously it is ex-

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posed, in the region of such contact, to the rays emitted by a radiant heater. Patent 2,861,354 by Odd Hultgreen.

CONVEYER SYSTEM FOR NEWSPAPERS AND MAGAZINES

Smearing of freshly printed conveyed newspapers and magazines can be avoided by this conveyer which uses a chain carrying transverse brackets, which chain is situated between central supporting rails in immediate proximity to the newspapers to be transported. Thus the center line of the chain is spaced a very short distance from the supporting points for the newspapers, and consequently there will occur practically no relative displacements between successive articles conveyed in overlapping relation, when these articles pass along curves of the conveyer track. Patent 2,861,674 by Walter Reist.

Binding, Cutting, Perforating:

PILING AND COUNTING BOOKS

In combination with a book trimming device, this machine provides for collecting a procession of books into a pile after they have been trimmed, and for discharging the piled books each time a predetermined counted number of the books have been collected. This is accomplished by an efficient sensing device. Patent 2,858,948 by Paul E. Kleineberg, assigned to T. W. & C. B. Sheridan Co.

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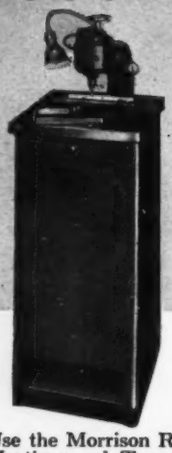

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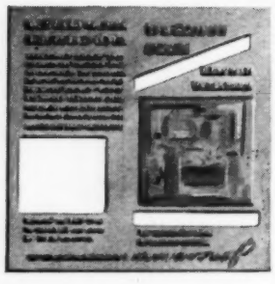

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MEETINGS for the PRINTING INDUSTRY

American Photoengravers Assoc. — 1959 Conv., Hotel Statler-Hilton, Dallas, Tex., Oct. 19-21. Exec. Secy. Frank J. Schreiber, 166 W. Van Buren St., Chicago 4.

ANPA Mechanical Conf.—1959 Conf., Hotel Morrison, Chicago, June 21-24. Mgr. Richard L. Lewis, ANPA Mechanical Dept., 750 Third Ave., New York 17, N. Y.

Book Manufacturers' Institute — 1959 Conf., Hotel Greenbrier, White Sulphur Springs, W. Va., Oct. 21-24. Secy. Miss A. G. Watson, 25 W. 43rd St., New York 36, N. Y.

Educational Graphic Arts Exposition—Coliseum, New York, N. Y., Sept. 6-12, 1959. Gen. Mgr. A. E. Giegengack, 5600 Massachusetts Ave., N.W., Washington 16, D. C.

Fifth District Craftsmen's Conf.—1959 Conf., Hotel Miami, Dayton, O., May 22-23. Secy.-Treas. George W. Thompson, Toledo Colortype Co., 1711 Jefferson Ave., Toledo, O.

Flexographic Technical Assoc. — Exec. Secy. Julian Ross, 220 W. 42nd St., New York 36, N. Y.

Graphic Arts Assoc. Executives — 1959 Conv., Hotel Plaza, New York, N. Y., Sept. 4-5. Secy.-Treas. William H. Gary, Managing Director, Printing Industry of Twin Cities, Inc., 2645 University Ave., St. Paul 14, Minn.

Gravure Technical Assoc.—1959 Conv., Drake Hotel, Chicago, Mar. 6-8. Exec. Secy. Edward S. St. John, Room 4800, 30 Rockefeller Plaza, New York 20, N. Y.

Great Lakes Mechanical Conf.—1960 Conf., Hotel Schroeder, Milwaukee, Wis., Jan. 17-19. Secy.-Treas. Don Clark, Stereotype Supt., Grand Rapids (Mich.) *Press.*

Intl. Assoc. Electrotypers & Stereotypers—1959 Conf., Hotel Biltmore, New York, N. Y. Sept. 7-10. Exec. Secy. Floyd C. Larson, 758 Leader Bldg., Cleveland 14.

Intl. Assoc. of Printing House Craftsmen—1959 Conv., Hotel Statler, New York, N. Y., Sept. 5-9. Exec. Secy. Pearl E. Oldt, 411 Oak St., Cincinnati 19, O.

Intl. Graphic Arts Education Assoc. — 1959 Conf., University of Colorado, Boulder, Colo., Aug. 2-7. Exec. Secy. Samuel M. Burt, 5728 Connecticut Ave., N.W., Washington 15, D. C.

Intl. Printers Supply Salesmen's Guild—1959 Conv., Hotel Statler, New York, N. Y., Sept. 4-5. Secy. Charles S. Tompkins, Tompkins Printing Equipment Co., 1040 W. Grand Blvd., Detroit 8.

Intl. Typographic Composition Assoc.—1959 Conv., Hotel Park Sheraton, New York, N. Y. Sept. 9-12. Exec. Secy. W. E. Switzer, 1015 Chestnut St., Philadelphia 7, Pa.

Iowa Newspaper Mechanical Conf.—1959 Conf., Hotel Fort Des Moines, Des Moines, Ia. May 23-24. Secy.-Treas. Paul F. Kamler, Mechanical Supt., Clinton (Ia.) *Herald.*

Kansas-Missouri Newspaper Mechanical Conf.—Kansas Gen. Mgr., Larry Miller, Kansas Press Assoc., 701 Jackson St., Topeka, Kans. Missouri Secy-Treas. William A. Bray, Missouri Press Assoc., 115 Walter Williams Hall, Columbia, Mo.

Lithographers and Printers National Assoc.—1959 Conv., Hotel Greenbrier, White Suhphur Springs, W. Va., Apr. 13-16. Exec. Dir. Oscar Whitehouse, 1025 Connecticut Ave., N.W., Washington 6, D. C.

Mid-Atlantic Newspaper Mechanical Conf.—1959 Conf., Shelburne Hotel, Atlantic City, N. J., Mar. 12-14. PNPA General Mgr. Richard Dew, 2717 N. Front St., Harrisburg, Pa.

National Assoc. of Litho Clubs—1959 Conv., Twin Cities (Minneapolis-St. Paul, Minn.), June 11-13. Exec. Secy. Fred A. Schulz, Buckbee Mears Co., Toni Building, St. Paul 1, Minn.

National Assoc. of Photo-Lithographers—1959 Conv., Hotel Muehlebach, Kansas City, Mo., Nov. 18-21. Exec. Dir. Walter E. Soderstrom, 317 W. 45th St., New York 36, N. Y.

National Paper Trade Assoc.—1959 Meeting, Waldorf Astoria Hotel, New York, N. Y., Apr. 1-3. Secy. J. H. Londergan, 220 E. 42nd St., New York 17, N. Y.

National Printing Equipment Assoc., Inc.—1959 Conf., Hotel Waldorf Astoria, New York, N. Y., Sept. 9-10. Secy. James E. E. Bennet, 140 Nassau St., New York 38, N. Y.

National Safety Council Printing and Publishing Section—1959 Meeting, Hotel Conrad Hilton, Chicago, Oct. 20-24. Staff Rep. Harry C. Johnson, National Safety Council, 425 N. Michigan Ave., Chicago 11.

New England Composing Room Executives Assoc. — Secy. Lewis R. Greene, Westerly (R. I.) *Sun.*

New England Newspaper Mechanical Conf.—1959 Conf., Hotel Statler-Hilton, Boston, Mass., Oct. 17-18. Secy.-Treas. Walter C. Crighton, Comp. Room Supt., New London (Conn.) *Day.*

Newspaper ROP Color Conf.—Secy. Arthur Brashears, American Assoc. of Newspaper Representatives, 141 E. 44th St., New York, N. Y.

New York State Capital District Mechanical Conf.—Dir. Floyd Laurenty, Albany (N. Y.) *Times-Union.*

Northwest Mechanical Conf.—1959 Conf., Hotel St. Paul, St. Paul, Minn., Mar. 7-9. Secy.-Treas. Ralph N. Carson, Linecasting Instructor. Dunwoody Industrial Institute, 818 Wayzata Blvd., Minneapolis, Minn.

Pacific Newspaper Mechanical Conf.—1959 Conf., Hotel U. S. Grant, San Diego, Calif. Sept. 25-27. Secy. Fred Moyer, Sr., 6630 Mayflower Ave., Bell, Calif.

Packaging Institute Assoc.—1959 Meeting, Hotel Statler, New York, N. Y., Nov. 16-18. Exec. Dir. Chas. A. Feld, 342 Madison Ave., New York 17, N. Y.

Printing Industry of America—1959 Conv., Hotel Waldorf-Astoria, New York, N. Y., Sept. 6-10. Gen. Mgr. Bernard Taymans, 5728 Connecticut Ave. N. W., Washington 15, D. C.

Research and Engineering Council—1959 Conf., Sheraton McAlpin Hotel, New York, N. Y., May 18-20. Managing Dir. Robert E. Rossell, 5728 Connecticut Ave. N.W., Washington 15, D.C.

Screen Process Printing Assoc., Intl.—1959 Conv., Hotel Statler, New York, N. Y., Oct. 31-Nov. 2. Exec. Secy. Robert H. Blundred, 549 W. Randolph St., Chicago 6, Ill.

SNPA (Eastern Div.) Mechanical Conf.—1959 Conf., Hotel Dinkler-Plaza, Atlanta, Ga., Aug. 9-11. Secy. John E. Johnson, Southern Newspaper Publishers Assoc., P. O. Box 1569, Chattanooga 1, Tenn.

SNPA (Western Div.) Mechanical Conf.—1959 Conf. Hotel Texas, Fort Worth, Tex., Mar. 8-10. Secy. Claude V. Capers, P. O. Box 1569, Chattanooga 1, Tenn.

Southern Graphic Arts Assoc. — 1959 Conv., Hotel Robert Meyer, Jacksonville, Fla., Apr. 27-29. Secy. Charles E. Kennedy, 1514 South St., Nashville 2, Tenn.

Technical Assoc. of the Graphic Arts—1959 Conv., Hotel Manger, Rochester, N. Y., June 15-17. Secy.-Treas. B. L. Sites, 421 Sunnyside Ave., Elmhurst, Ill.

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News Items

(Continued from Page 22)

Cornelius Printing Names Manager—Thomas T. Lowe has been appointed manager of Cornelius Printing Co., Silver Spring, Md., following the retirement of Shirley Workman, former vice president and general manager. Lowe has been with the publication printing firm since 1935. Workman, retired after 25 years of service, will make his home in Hendersonville, N. C.

Kaddeland Dies—Chris Kaddeland, 78, well known throughout the Graphic Arts industry for his many contributions to the design and engineering of printing presses and other printing equipment, died recently while visiting in Connecticut. He was an engineering consultant for Miehle Company, Div. Miehle-Goss-Dexter, Inc. Prior affiliations were with the Hoe Company and Harris, Potter, Seybold Co. His career in the Graphic Arts covered almost 60 years.

Herald-Traveler Personnel Changes—C. Stanley Whyte, composing room superintendent and production manager, Boston *Herald-Traveler* has announced the appointment of Edward Jennings as head night machinist. He succeeds John A. Kane, who recently resigned. Herbert Connors has been named assistant to the head night machinist.

Boston Appointment—Robert E. Altman has been promoted to Boston branch sales supervisor, Printing Products Div., Minnesota Mining & Mfg. Co. He will be responsible for printing products sales in the New England states and in New York state with the exception of New York City. Also announced was the promotion of George F. Murphy to the newly created position of sales manager for national accounts, of the same division. Murphy will make his headquarters at 3M's Ridgefield, N. J. branch.

GPI Appoints Two—G. Thomas West has been named a vice president of the Eastern Division, General Printing Ink Co., according to John S. Thome, vice president, Sun Chemical Corp., and general manager of the Graphic Arts group. West makes his offices at 750 Third Ave., New York, N. Y. Also announced was the appointment of Roy Hearn as general sales manager of GPI's new Atlanta plant.

Huber Branch Managers—Neil Crowding and S. Jerry Vilardi have been named assistant branch managers of J. M. Huber Corp.'s Ink Div., it was announced by J. S. Hart, vice president. Crowding will have offices at Hillside, N. J. Vilardi will be headquartered at McCook, Ill.

Lawrence Meyerson Dies—Lawrence Meyerson, Bond Printing & Engraving Co., Cleveland, and chairman of the Recruitment and Selection Committee, Educational Council of the Graphic Arts Industry, Inc., died on Jan. 17. Meyerson was in the printing business for over 25 years and was actively associated with Printing Industry of Cleveland.

B. Offen Moves Office—B. Offen and Co. has moved its sales and engineering offices to new and larger quarters. New address is 29 E. Madison St., Chicago 2.

3M Promotes Sales Executive—Promotion of Melville E. Potter to special accounts sales manager, duplicating products division, has been announced by Minnesota Mining & Mfg. Co. Potter, who joined 3M in 1950, has been north central area sales manager for the duplicating products division for the past year.

ATF Florida Appointments—Veo K. (Tex) Pearson has been appointed sales representative for American Type Founders Co. in most of the state of Florida. R. J. Thorburn has been appointed an authorized ATF parts and service dealer covering most of the state of Florida. He was formerly an ATF press erector and serviceman.

Harris Presses for New York Lithographers—Shown in the process of erection or testing at Harris-Seybold Company's plant in Cleveland are $3 million in offset presses recently ordered by New York (N. Y.) lithographers. Included are three four color 77 in. presses, a 60 in. two color and a 77 in. two color. Two 49 in. two color Harrises have already been shipped to New York and seven 25 in. by 38 in. two colors are on their way.

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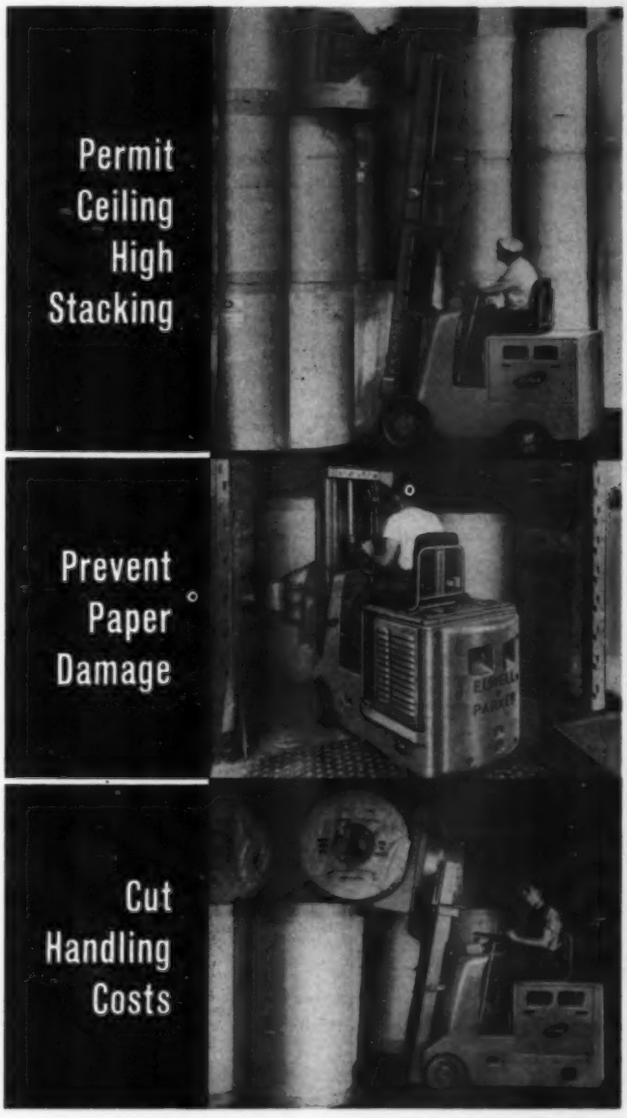

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ITCA Officers—With the exception of one, the new officers for the Intl. Typographic Composition Assoc., Inc., are shown here. They were selected at the annual ITCA Convention held recently in Los Angeles.

From left to right, they are: W. E. Switzer, ITCA executive secretary, Philadelphia; Frank Lightbown, immediate past president, Cecil H. Wrightson, Inc., Boston; Walter R. Adamson, president, Mono-Lino Typesetting Co., Ltd., Toronto; Clarence E. Harlowe, first vice president, Harlowe Typography, Inc., Washington, D. C.; John W. Shields, elected treasurer for the twenty-fifth year, John W. Shields, Inc., Bridgeport, Conn. Absent was: Henry J. Wolf, second vice president, Service Typographers Inc., Chicago.

Press Developments

(Continued from Page 58)

porary to its permanent position.

Advice on integrating a pre-printed color insert in a regular newspaper press run was given in a talk by Edward Kelly, Safran Printing Co., Detroit. This company has printed such inserts by web offset for various newspapers which he maintained can be handled without difficulty by press crews on most newspapers.

Biggest problem in this kind of an operation, Kelly said, was that they first found the inserts were smeared and badly marked. It was traced to the dragging of the coated sheet over a surface causing friction which smeared the ink pigments.

Correcting Smear Problem

The speaker offered ways to correct this situation. Clean the press unit through which the insert is to pass. Ink rollers should be cleaned, but ink can be left in the ink fountain. All angle bars, pipe rollers, and formers should be cleaned. Cover the tension belt on the feeder with a 1/16 in. thick layer of Du Pont's Teflon plastic. Cover the angle bars, pipe rollers and former with a 0.010 in. thick layer of Teflon. If the insert is not to be pulled over the former, the Teflon is not necessary here. The plastic is applied by using a two-sided masking tape.

Improvements in quality of newsprint were outlined in a prepared talk by Thomas F. Gougarty, Lake Superior Newsprint Co. He claimed marked improvement has been obtained since 1946 in opacity, strength and finish.

Advantages of bay window leads on a new Hoe press arrangement at the La Crosse (Wis.) *Tribune* was explained by its production manager, Robert Burgess. A bay window, he said, turns the sheet over and moves it inside the paper. Burgess maintained it offers versatility for color positioning.

According to the speaker, running a bay window lead requires little more effort than running an angle bar lead, and can be done at high speed. Burgess told of positioning color on page three under the bay window lead arrangement.

Handling Packless Mats

More information on the effects of the packless stereotype mat in the pressroom was afforded conferees in a talk given by William Inskeep, pressroom superintendent, Cincinnati *Enquirer*. He confessed that they first experienced many difficulties in both the composing room and pressroom in using Mat Pak.

He said they use an Alico plate gauge for measuring surfaces of plates. Inskeep added: "The gauge settled many controversies as to where the fault lay when there was poor printing. It also answered many questions and revealed hidden characteristics of the No Pak mat."

On press packing, he advised using a very firm top blanket and a softer (cushion type) under packing with spring or bounce to it. The softer underpacking brings it down 0.003 in. or 0.004 in. after a few thousand impressions. From there on, Inskeep stated, the blanket will become seated and impression is only added when needed over blankets."

Mailroom Speeds Increased by Better Machines

FAST moving developments in mechanization of mailrooms were reported at the Great Lakes Conference last month by representatives of companies who are actively engaged in programs designed to speed up mailroom production. The separate session was conducted by Edwin Koffke, mailroom superintendent, Milwaukee (Wis.) *Journal*, and George Murray, mailroom superintendent, Detroit *Free Press*.

The mailing label processing system in use at the Milwaukee *Journal* as developed by Addressograph-Multigraph, Inc., was described by a representative of the latter company, R. M. Thornton. Key to the system is a Class 3400 Adressograph machine for the processing of wrappers at speeds claimed to be up to 6400 plates per hour.

Efforts at developing the Cheshire addressing machine so that it would deliver in a straight line were related by Ralph Doane, Cheshire, Inc. The solution, he said, was to deliver the papers from the feeder into grippers. These grippers carry the papers past the rotary labeling head and at the delivery conveyor tuck each paper under the preceding one so that the label is exposed, even though the delivery is in a straight line. This method, he added, permits a complete straight line operation.

This improvement has been incorporated in Cheshire's Model N 3000 newspaper labeling machine. The unit will handle papers from 16 pages to well in excess of 100 pages.

Error Memory Device

An error memory device installed on newspaper stuffing machines was described in a talk by William Meier, T. W. & C. B. Sheridan Co.

He claimed the unit has eliminated the stops on stuffing machines on individual misses and the consequent manual filling of the empty or missed bucket. This incomplete paper is not counted and when it reaches the delivery spider, it is identified on the conveyor because it has been kicked to the opposite direction of the 25 or 50 kick sheet.

Meier also mentioned some of the Sheridan company's latest developments in mailroom equipment. These include a unit for applying top and bottom wrappers to newspaper bundles and a machine for single wrapping and labeling. He added that they were currently testing a counter stacker which is attached to a stuffing machine equipped with an error memory device.

Because the error memory devices are installed on machines at the Detroit *News*, Russell Vahlbusch, that newspaper's mailroom superintendent, was asked to elaborate on their effectiveness. He said the *News* averages about 5000 rejects on a 370,000 run with six hoppers in operation on five machines.

Visitors from India—India Newspaper officials, A. B. Nair (left), managing director, Bombay *Free Press Journal*, and D. N. Dasgupta (right), news editor, Calcutta *Hindustan Standard*, recently visited the Goss Company plant in Chicago. Hosts were Goss officials G. E. Moldenhauer (standing) and C. S. Reilly (at desk).

A movie showing various units of the Wallastar mailing room equipment was presented by Harry Spragg, Toronto Star, Ltd. Part of the movie was concerned with a device which automatically applies the bottom wrapper to a newspaper bundle while on the conveyor line. Spragg was later asked what kind of stock could be used on the bottom wrapper device. He replied that it accommodates from 20 lb. to 60 lb. stock and also some of the laminated varieties. The unit also accommodates two rolls of paper.

Develops New Machinery

New mailroom equipment designed by the Materials Handling Div., Miehle-Goss-Dexter, Inc., was explained by Lou Durant of that company. One of these is a counter-stacker designed to automatically create counted stacks of newspapers at the end of the dispatch conveyor from the press.

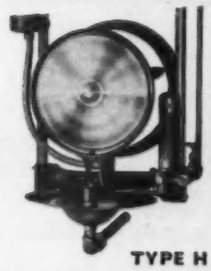
The speaker said the counter-stacker will operate at a rate of up to 30 complete cycles per minute. This speed, he added, would match a press producing papers at 60,000 papers per hour by delivering 30 stacks containing as few as 30 papers per minute. The counter portion of this machine is photoelectric in principle and counts newspapers on the conveyor between pressroom and mailroom by detecting the shadows created at

YOU CAN AFFORD THIS MONEY-SAVING

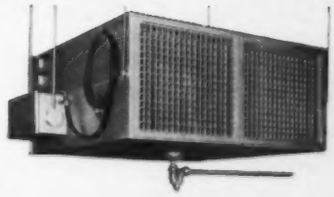
HUMIDITY CONTROL

WITH Guaranteed Bahnson UNIT HUMIDIFIERS

TYPE E



TYPE H



TYPE BA

Units cost as little as $10 per year per unit to operate and save you dollars! Installation requires no floor space and can be made singly or in groups. Water or steam units are self-contained, have high capacity, automatic controls. A complete line of sizes and types to fit your needs, any size area.

HELPFUL FREE BOOKLET

Informative booklet tells you how to cut waste, increase profits with controlled humidification. Just mail this coupon with your letterhead today.

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Winston-Salem, N.C.

PR-2

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the half folds by a light within the unit.

Durant also described two new in-line stuffing machines. Both are similar in operation and differ mainly in the number of sections which can be handled at one time. The two-feeder machine, he commented, has been developed to satisfy smaller stuffing requirements and is able to handle inserts of up to 96 pages at speeds to 12,000 stuffs per hour.

The multiple-feeder stuffing machine, also an in-line design, permits installation of additional heads so that entire stuffing requirements can be completed in a single operation. It is equipped at one end with either one full speed jacket feeder, or two jacket feeders. At the insert end of the machine, any number of insert feeders from one to eight or more, may be installed. The multiple-feeder machine also includes a memory device which, by use of calipers to detect misfeeds or doubles, diverts the occasional improper assembly, without stopping the machine, to an auxiliary delivery under the jacket feeder.

A progress report on the development of the Cutler-Hammer newspaper counter-stacker was made by J. W. Vogel of Cutler-Hammer, Inc. The newspaper product which the unit handles may vary in size from a 12 page to a 128 page half-fold paper. Maximum rate of paper delivery it will accept, Vogel said, is 60,000 newspapers per hour.

The speaker reported a number of changes and revisions have been made in the machine since it was installed on an experimental basis in 1955 at the Milwaukee *Journal*. The counter was changed to an electro mechanical system. Also, the operation of the stacking blades has been improved and an improved method of intercepting the paper stream was obtained.

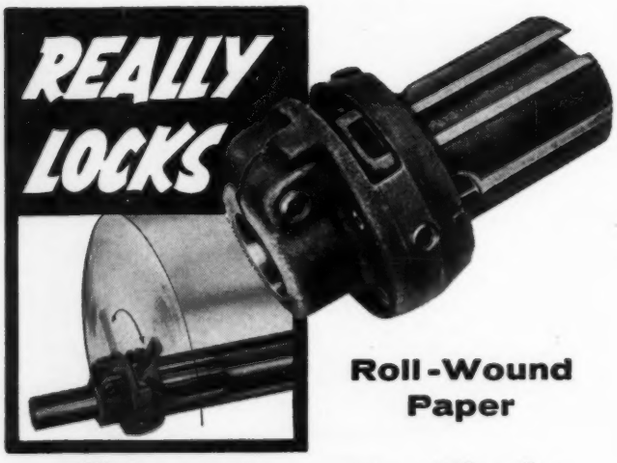
One of the recent changes, is a fully transistorized counter, completely eliminating tubes. This counter consists of a collection of transistor control cards with special features to insure consistent and reliable interception as well as an accurate account.

Vogel mentioned that a counter-stacker has been installed at the Chicago *Daily News* since last July. A log has been kept of the operation of this machine, he said, and it has counted and stacked about 13,000,000 papers. It has operated at speeds of about 50,000 per hr. and with papers from 28 to 76 pages.

New Type of Conveyor

A description of a Swiss-made newspaper conveyor installed at the Detroit *News* by Radio Corp. of America was provided by Russell Vahlbusch, mailroom superintendent of that newspaper. Called the Ferag conveyor, Vahlbusch said the ability of the conveyor design to utilize gradual or abrupt twists and turns may allow for a variety of adaptations in the physical layout of future mailing rooms.

The new conveyor design consists of a single H-shaped rail with two channels which house an endless chain for providing continuous delivery. Extended on both sides of the conveyor chains and at right angles to it are forwarding bars. The forwarding bars accommodate clamps which hold the papers in



Roll-Wound Paper

Efficiency Expansion Chucks

In one operation, lever the cam and lock it. It won't slip —ever. Unwind, rewind, or brake easily. There are efficiency expansion chucks for either fibre or steel cores up to ten inches in diameter—for shafts of 1" to 3½" in diameter in graduations of 1/16".

Chucks are inter-changeable—no rights or lefts. Give years of service—made of malleable high strength castings. Surfaces which contact core are precision machined. Lever action applies powerful force to the expansion jaws. Ribbed jaws bite firmly into core, eliminating core slippage when starting or changing speeds, even under extreme brake tension.

Write for the full time and money saving facts to—

VALLEY MFG. CO. Valley, Nebraska

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NOW AVAILABLE

NEWSPRINT BUMPING PADS

Cork or rope filled

Write today for price on your requirements

SOON TO BE ANNOUNCED

THE A.P.S. VACUUMSCORCHER. THE MATRIX SCORCHER DESIGNED FOR BOTH NO PACK AND REGULAR DRY MATS

Write today for the latest information

A.P.S. Inc.

American Publishers Supply, Inc.

P.O. Box 421 Lynnfield, Mass.

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place. The papers coming out of the folder are guided into the open gripping members. At the delivery station, clamping members are opened and the papers are guided to the delivery belt.

Vahlbusch reported that recently an automatic bottom wrapper machine, an automatic feeder, and a new roller table had been installed at the *News*. These three pieces of equipment, he said, constitute an effective system to expedite the processing of newspapers from press delivery through the wrapper machine. The speaker predicted that mailrooms of tomorrow will utilize many additional innovations and inventions to increase productivity.

Engravers' Discussions

(Continued from Page 61)

is arranged on printed flats so the flats can be cut apart into a complete ad for each advertiser.

Powderless zinc etching process was commenced in September, 1957. He stated also: "We intend to use all three metals and mixes for some time to come. We must be protected to meet edition and proof schedules, particularly with photocomposed cuts." Three Photon machines in the composing room provide up to 85,000 sq. in. for a four-week period. He enumerated what he called important factors in using all three etching mixes. During shipment it seems that the mix components separate in cold weather. "Our practice," he said, "is to heat to 105 deg. F. and shake manually to mix. He referred to equipment which is on the market for mechanically heating and shaking. If the components are not uniformly dispersed prior to making up a bath, excessive and persistent undercutting and blotches of grease on the plate are present."

With respect to the stability of the bath after mixing, in general, all three mixes work very well during continuous operation.

Bronger reported: "Watch uniformity of etching among suppliers' batch numbers."

Bronger asserted the proper type halftone negative is the same type negative as has been made for the powder etch.

The print must be developed thoroughly.

Burning in on a gas stove is done at 380-400 deg. F. Some experimentation has been done with an infrared oven and very good results have been obtained in about 4 min.

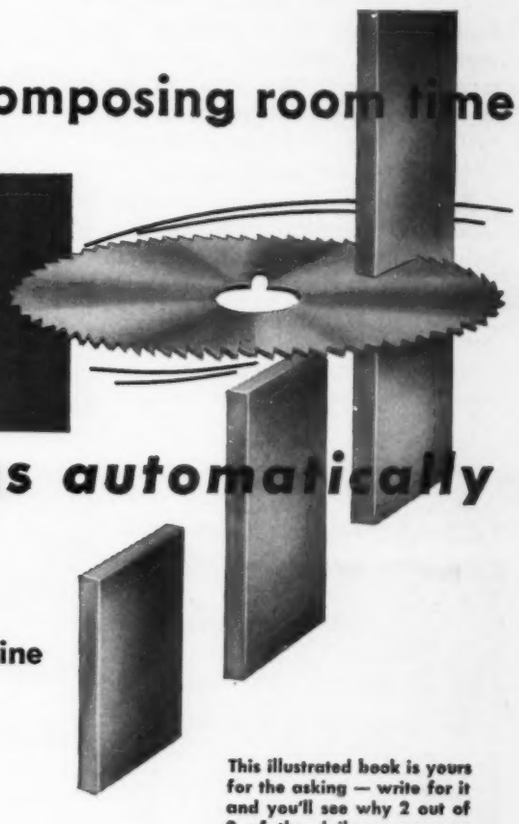
Bronger warned: "Do not cool the plate with water after the burn-in. Let it cool slowly on a wooden slab, or cool by air. When too cool, a metal slab can cause some buckling which could result in deeper etching in the center of the plate than around the edges. Rapid cooling causes difficulty in de-scumming, grainy bottoms in etching, and makes for harder routing in the machine room."

Referring to zinc deposited in the bath, Bronger said he is getting about 135 oz. to 160 oz. of zinc deposit in each bath without 40 oz. of sweetening as is reportedly done in some plants.

Bronger's concluding remarks were: "We intend to continue using all three metals and mixes, using one metal and mix until we are down to about 15 gal. of mix and 150 sheets of metal, then using another to the same degree, until we

SAVE composing room time

The Mohr Saw



saws slugs automatically

- to *any* measure
- right at the machine
- without spoilage

This illustrated book is yours for the asking — write for it and you'll see why 2 out of 3 of the daily newspapers in the U.S. use the time-saving Mohr Saw.

A Mohr saw, attached directly to your linecasting machine, will cut away the parasites that prey upon profits—walking time, waiting time, sawing time and jam-ups. All sawing is done right *at the machine*,—and you'll get a *better job* without spoilage.

Mohr LINO-SAW Company

8015 N. Ridgeway Ave., Skokie, Illinois

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have used all three metals and mixes. The reason for this is we will always have some 40 to 45 gal. of production-tested batch numbers on hand to continue operating without potential interruption."

Question and Answer Period

For the question and answer period of the photoengraving session, Chairman Scherer requested W. S. (Bud) Coulson to serve as moderator.

One of the questions submitted was *When are you justified in putting in the powderless etching method and equipment?* George Rothermel said it was difficult to answer the question. However, some newspapers have installed the method in plants where as low as two flats per day are produced. These plants had good results.

Frank Bonner related that when Dow first came out with its fast etching process, the company felt 10 flats per day would be the minimum justification for putting in the fast etching method and equipment. Later, as a result of experience and benefits secured, as low as two flats per day was deemed sufficient justification. In reality, he said, "It is up to the customer." Putting it another way, Bonner said if you put through six flats per day in 24 hrs. consisting of two halftone flats, two line flats, and two combination flats, the operation should be satisfactory.

In response to a question as to how far in advance of regular use fast etching equipment should be installed, the answer was approximately a month where photocomposition is employed.

Pimpling is Still Problem

With respect to a question on pimpling, Rothermel replied it still is a problem. Generally, pimpling is caused by small pieces of the resist which remain on the plate. Improved de-scumming operations can help. Poor circulation of the solution in the machine is another cause. However, the manufacturers have improved the machines to eliminate this problem.

Frank Bonner commented that pin holes in the negative print through to the zinc. Pimpling cause is not thoroughly understood. He stated the print should be clean before putting in the machine. He said a better print or negative should be obtained and careful de-scumming should be observed.

Dalton commented that one remedy is to add more acid to the bath but he thinks all engravers have pimpling trouble.

Roache commented that when first starting the fast etching method, powder particles from the burning-in stove seemed to float in the air and cause trouble. The stove was cleaned after which the trouble disappeared.

In de-scumming, the engraver must learn the exact technique and must not use pressure on the swab, but should let the solution do the work.

There was some trouble with respect to etching machine main-

Gravure Cylinders MIRROR SMOOTH

The Ultimate in Precision GRINDING and POLISHING MACHINES

Available In Two Sizes

29 Years of Quality and "Know-How"

Grinding and polishing copper plated Gravure Cylinders is done with special "Intaglio" stones. Water is used as a coolant, thus eliminating all dust. The resulting finish is finer than obtainable with paper and is completed in half the time.

STANDARD PROCESS CORPORATION

Manufacturing Gravure Equipment and Supplies

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"Capco" Portable Ink Fountain

Installation on Duplex Tubular Press

- Provides COLOR efficiently
- Increases production—affords press-room savings up to 75%

Weight—Approx. 30 lbs.

- Saves time of pressmen—no costly installations
- Can be used on new or older equipment
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LET US TELL YOU ABOUT THE MANY OTHER FEATURES!

CAPITAL TOOL and Manufacturing Co.

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tenance where trouble was experienced because the maintenance was not thorough.

Checking New Etching Machines

Wes Miller discussed the procedure for checking a new machine. When a new machine has been installed the rotation of the motors should be checked, temperature control should be checked, as well as the refrigeration on smaller machines. One important item with respect to all machines is that they should be level on the floor. It is highly important that the machine be cleaned out thoroughly after installation and before putting into use. After the plumbers and electricians have finished their work, there may be small chips, particles, and just plain dust. Before being put into production operation a weak solution of tri-sodium phosphate or other detergent should be used. Another important factor to good operation is that the pump screen should be clean.

Vic Chapiesky of Chemco Photo Products, discussed machine maintenance. He said motors and V-belts used on older machines should be checked. The pumps sometimes give trouble because of the belting. Chemco now puts on a rubber gear type of belt which operates on gear-type of pulley so as to maintain more even paddle speed. Paddle blades should be adjusted at an angle of 30 deg. He also recommended that the engraving department use the grease and guns sent by the equipment manufacturer.

New Cleveland Location—Turner Printing Machinery, Inc.'s Cleveland office is now located at 6510 Euclid Ave. The building (shown above) is said to permit easier moving of printing machinery. The Cleveland branch is co-managed by Carl Williams and Robert Sperling.

Machinists' Discussions

(Continued from Page 64)

William Mulroy, manager sales and service, Mergenthaler Linotype Co., discussed Linotype's manually controlled and the new electrically controlled Hydraquadder. On both models the vise jaws are actuated in their functions by hydraulic means. The Hydraquadder, explained Mulroy, is independent of machine functions except for timing operations. The electrically controlled model is designed for manual or tape operation. Can be operated at 12 lines per min. An electrical left-hand vise jaw safety prevents casting a slug if for any reason the matrix line is not aligned properly. There is a controlled wiping of the vise jaws as the matrix line rises after the cast.

W. T. Christmann discussed at some length two recent improvements in the Mohr Saw for application to Intertypes and Linotypes. The first of these consisted of a positive control for slugs, particu-

STOP Mechanical Teletypesetter Errors

. . . with SHAFFSTALL MAT DETECTOR

This amazing electronic device "proofreads" each line mat by mat in Teletypesetter tape composition—stops the machine if an error occurs. Eliminates repeated mechanical errors, cuts proofreading time and reruns. Quickly pays for itself! Get the facts about SHAFFSTALL ELECTRONIC TTS ATTACHMENTS —used by over 15% of all Teletypesetter-equipped plants!

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1717 Gent Avenue • Indianapolis, Indiana

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BEVERIDGE "500" SYNDICATE MATS

KEEP YOU A BIG JUMP AHEAD

- ALMOST INDESTRUCTIBLE DESIGNED FOR TOUGH CONDITIONS, HIGH TEMPERATURES AND MULTIPLE FLAT CASTS.
- AGED BY NEW METHOD TO ASSURE PERFECT UNIFORMITY AND HIGH FIDELITY.
- AVAILABLE IN ORANGE, IVORY AND WHITE.

NEW PRODUCTS DIVISION OF

THE BEVERIDGE PAPER COMPANY

INDIANAPOLIS 4, INDIANA

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Meter Light for Perfectly Controlled Exposures

ESSAR LIGHT INTEGRATORS meter light and monitor color temperature, exposing copy to the exact amount of light for which you set the instrument, regardless of arc flicker or voltage fluctuations. Exposures, always constant, always precisely controlled, can be lengthened or shortened by simple dial adjustment . . . or setting may be made once for any number of identical step and repeat exposures. It costs no more to own an Essar, the finest of light integrators.

WRITE FOR BULLETIN NO OBLIGATION

472 PAUL AVE. • ST. LOUIS 21, MO.

unitronics, inc.

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larly of the overhanging ad figure variety, when the slugs are passing through the knife block. This new device presses the constant side of the slug firmly against the vise frame and also downward against the lower knife block liner so that every slug is uniform.

Christmann also described what is called the Mohr Measurematic Gauge. This gauge automatically measures open spaces in the first or top slug for food store overhanging advertising figure composition. The operator can tell at a glance how much space in picas is to be filled in. The device consists primarily of two scales mounted on the slug jogger in the machine's slug delivery galley. These scales are parallel to each other. The left hand scale which is black is stationary with respect to slug length movement. The yellow scale at the right is used to measure from the upper end of the slug as delivered into the galley to tell the operator where to set the words on the second slug in food store composition to properly align with the master or first slug bearing overhanging figures. The yellow scale moves with the regular Mohr Saw dial and is always in position to measure from the upper end of the slug, no matter what its length. The black scale at the left with its zero at the lower end of the slug tells the operator how many picas he will need to center the words or figures to complete the two line description opposite the overhanging figure types. The scales are covered with a transparent plastic to avoid obliterating the pica calibrations through use.

Christmann also discussed two additional features incorporated in the Measurematic Gauge mechanism. The first of these is a new diversion plate which guides chips from the saw blade into the waste chute, as much as up to 75% of the chips formerly escaping to the slug delivery pan. He also said the slug jogger studs are now screwed in place. A screwdriver can be used to remove them and replace the slug jogger springs.

In answer to a question regarding swinging of spacebands at second elevator transfer on TTS operated machines, George Bolton, chief machinist, South Bend (Ind.) *Tribune*, made several suggestions to overcome the difficulty. Slow down, as much as possible, the transfer lever motion by adjusting the oil cushion. Apply a horizontal friction buffer at the front of the transfer channel. It is not advisable to raise the regular transfer rail because in that case the spacebands will tear the second elevator bar teeth-rails.

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MIDWEST HAS A COMPLETE LINE OF COMPOSING, STEREOTYPE, ENGRAVING, ELECTROTYPE AND PRESSROOM SUPPLIES AND EQUIPMENT.

MIDWEST STOCKS HUNDREDS OF SUPPLIES AND REPRESENTS EVERY LEADING EQUIPMENT MANUFACTURER.

MIDWEST IS A NATIONAL SALES ORGANIZATION REPRESENTED BY LEADING DISTRIBUTORS AND AGENTS THRUOUT THE UNITED STATES.

FOR CATALOG WRITE

MIDWEST PUBLISHERS SUPPLY CO.

4500 W. CERMAK ROAD

CHICAGO 23, ILLINOIS

Circle 112 on Reader Service Card

Outlook for Equipment

(Continued from Page 41)

Sale of costlier machinery has been helped, too, by the rise of run-of-paper color printing. As of midsummer (1958) color ads were being accepted by 889 newspapers with 74% of the nation's circulation, compared to 619 in 1956, at which time ROP color ad linage already had jumped almost 130% in five years. At last count, for October 1958, the ROP color gain amounted to 12.8% over 1957.

The writer observes: "In more and more localities, color thus is almost a necessity to stay competitive in advertising, and most older presses cannot produce it unless the over-all press run is reduced. To be sure, the very newspapers that need the newer color-convertible presses often can least afford them. But as one press maker observed: 'They can't afford to be without them, either.' This circumstance has helped the press manufacturers make inroads on a tough market."

He concludes the article by writing: "Most of these developments are coming from relative newcomers to the printing machinery industry. Accordingly, the old-line manufacturers face mounting competition in supplying the present limited needs of the nation's press. Sooner or later, however, the march of technology ought to mean more business for all."

TO HELP BOTH OF US...

Any changes that should be made on your address plate can best be done with this card. If possible, attach your present magazine wrapper address to "Old Address" section. When filling in new address, please be sure to give your title and zone number.

MY OLD ADDRESS READ:

(THE EASIEST AND BEST WAY TO GIVE US THIS INFORMATION IS TO CUT OUT THE ADDRESS SECTION OF YOUR MAGAZINE WRAPPER AND ATTACH TO THIS CARD)

NAME_____

COMPANY_____

COMPANY ADDRESS_____

CITY_____ ZONE____ STATE_____

KEY NO. _____

MY NEW ADDRESS IS:

NAME_____

TITLE AND DEPT._____

COMPANY_____

COMPANY ADDRESS_____

CITY_____ ZONE____ STATE_____

FIRST CLASS
PERMIT NO. 2285
CLEVELAND, OHIO

BUSINESS REPLY CARD
No Postage Stamp Necessary If Mailed In the United States

POSTAGE WILL BE PAID BY

PRINTING PRODUCTION
1276 West 3rd Street
CLEVELAND 13, OHIO

READER SERVICE DEPARTMENT

FOR YOUR CONVENIENCE.

See other side of this card for the quickest and best way to let us know of any change that should be made in your address.

ANPA Research Groups

(Continued from Page 37)

it retain the responsibility . . . it now has; to feel the pulse of the industry, and to know its research needs, to ascertain that proposed projects are thoroughly evaluated prior to their selection . . . and to follow the progress of research projects in the laboratory and to constantly re-evaluate the research effort.

The committee recognizes the pressing need for routine ink and paper testing services, and for other quality control tests. However, once this initial work is done . . . the routine tests could eventually be carried on elsewhere, leaving the researchers to carry on with more creative work.

The Silha committee believes that research projects should be selected with the thought that the newspaper printing industry urgently needs technological evolution to relieve the heavy cost burdens. The committee recommended improved communication with the industry to aid in selling a long-term research program. Maximum use would be made of manufacturers' research abilities under the term of cooperative research.

Possible projects mentioned by the committee are as follows: (1) Use of magnetic tape instead of punched tape for TTS and phototypesetting equipment. Storage of images of photographs on magnetic tape for use with phototypesetting equipment to compose a complete page of pictures and type.

(2) Direct plate printing studies. Production of multiple printing plates from a photographic image of the page.

(3) Possible use of photosensitive plastics in platemaking. Light passing through a transparency could affect a light-sensitive plastic in such a way that heat and pressure could develop a relief printing plate. Plastic plates could lead to lighter presses.

(4) Possible use of chemicals as a means of eliminating routing curved stereotype plates.

(5) Ferromagnetic or smoke printing processes to drastically reduce size and weight of present equipment and to increase speeds.

What Should be Done for Smaller Papers?

Apparently, even though there are a greater number of them in the industry, the smaller paper group (under 10,000 circulation) queried about their research welfare, replied: "The laboratory should not worry, for political reasons, about smaller newspapers as a class. Anything that benefits the metropolitan papers and the intermediates will soon trickle down. Because of greater maneuverability in some areas, the smaller papers might well be able to put into practice more quickly than their larger contemporaries some of the developments requiring new techniques."

Other Silha Committee Recommendations

Other Silha committee recommendations are as follows:

It is thought by the committee that a stronger morale among the laboratory staff personnel would be

SPEED PRODUCTION WITH RICHARDS'

SAWS • ROUTERS • MORTISERS

Stereotype Saws Three Sizes

Curved Plate Routers Tubular or Semi

Flat Plate Routers Three Sizes

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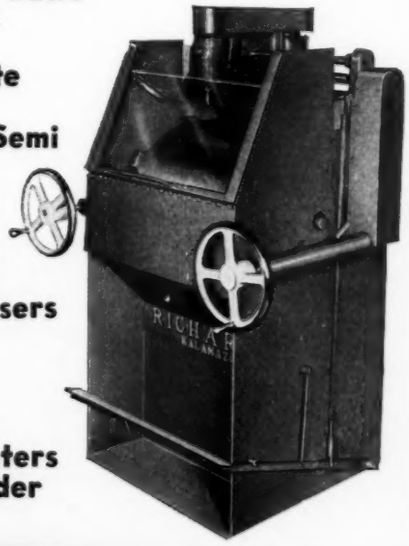
Special Routers Built To Order



J. A. RICHARDS COMPANY

903 N. PITCHER STREET • KALAMAZOO, MICHIGAN

For More Information Circle 150 on Reader Service Card

"THAT looks like just the dress I want"

. . . asserts the shopping minded Mrs. "I haven't had a new thing in ages."

"Yes," remarks Mr., "but that is the same ad you saw in the other paper and said you didn't care for it."

"Well, maybe, but it looks different here. I'll go down the first thing in the morning and see it."

The "different" look, it so happens, is a matter of stereotyping. The alluring picture was printed with the aid of Certified Mats.

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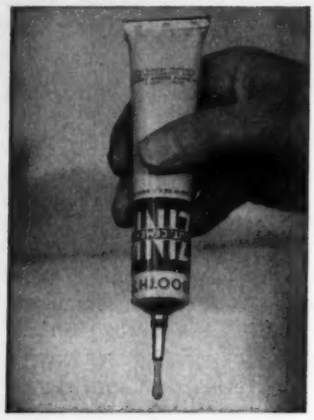

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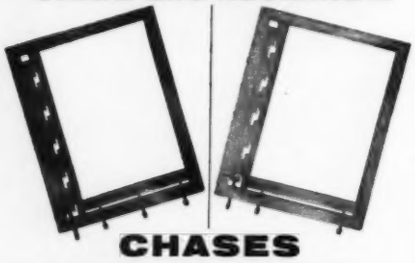

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of inestimable value. This could be accomplished by better screening of projects to insure their usefulness when completed. Nothing breaks down morale so quickly as a "So what!" attitude on the part of the industry when a project is completed.

More frequent attendance at regional publishers' conferences by the staff is recommended.

Continuance of the policy of an annual staff salary review is recommended.

The committee feels that the laboratory research team . . . has not had opportunity to perform up to its capabilities. A further evaluation of personnel would be advisable in 9 to 12 months (and regularly thereafter) after the staff has operated under what is hoped to be improved direction and climate for their work.

Production Engineering Committee

The Production Engineering Committee, under chairmanship of W. Howard Baldwin, reported to the Research Institute president, Lisle Baker, jr. The committee meetings were conducted on a general discussion basis with committee members drawing upon their own newspaper operational knowledge in arriving at conclusions.

It is the opinion of the Baldwin committee that production engineering has a definite place in the Research Institute program.

In its summary, the committee concluded: "Small, medium and large newspaper operations need production engineering help. Since their problems are completely different, very few projects will be of help to all sizes of newspaper operations."

The committee feels that research direction should point more toward the needs of newspaper production today rather than blue sky future methods of producing news media. Basic research, states the committee, will be valuable but will have to be developed on a very limited budget to start and probably should be only a by-product until a complete well financed program can be developed.

The Baldwin committee asserted that parts of the research work accomplished to date have value; other parts have very little value. Only one, two or three research projects should be undertaken at one time. They should be pretested for results and pushed to completion as rapidly as possible.

Reports of the Research Institute should be confined to simple, one-page progress reports. "The reports," the committee stated, "should completely refrain from any attempt to propagandize the usefulness of the Research Institute."

It is a conclusion of the Baldwin committee that the personnel of the Research Institute have not had the opportunity to demonstrate whether or not they are capable.

The committee reported that the Scan Engraving project, set up to evaluate and compare Klischograph, Fairchild and Elgramme equipment, from points of view of expense, speed, quality and skills required, will be of little value. The committee concluded that a more complete and valid study could be made by the ANPA Mechanical department.

The ad composition study conducted by Johns Hopkins university will be of considerable value. . . . Some newspapers will use the systems developed, to others it will be an eye opener in setting advertising rates.

Impractical Goals

The Baldwin committee also reported that cost accounting and general accounting procedures vary so widely that a standard newspaper cost accounting system intended to be adopted by numbers of newspapers was an impractical goal.

In the matter of wage and salary administration, the impact of unions makes Institute investigations in this field inadvisable.

The committee reported that the work measurement phase of industrial engineering, dealing with improved scheduling of manpower and workflow methods within the existing framework of newspaper mechanical departments has been largely overlooked by the Institute. The committee recognized that there is probably a greater potential cost saving for a given newspaper to be had immediately from this type of study than from any of a number of other objectives.

The committee also feels that the Institute could be of benefit to member newspapers by one of two approaches: (1) To send its own trained engineers into a newspaper

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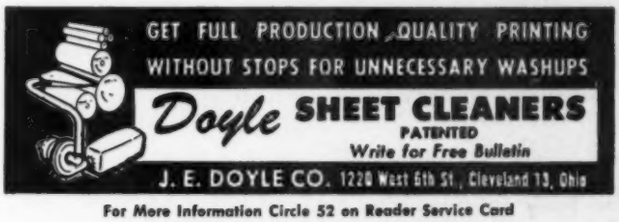
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Sizes: 8 x 10 to 23 x 29 in.
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***Flat-Ground* TURTLE**

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Western Sales and Service
3156 Wilshire Blvd., Los Angeles 5, Calif. Phone: DUnkirk 8-9931

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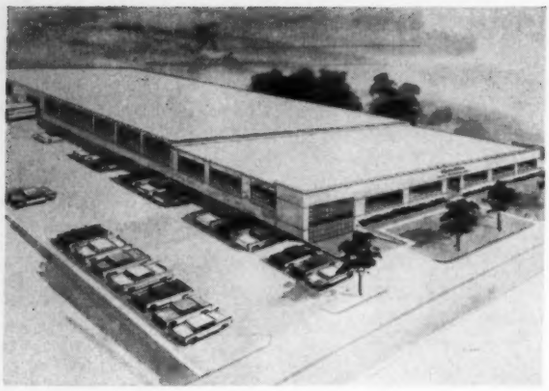

Robertson Enlarges Plant—Robertson Photo-mechanix, Inc. recently opened a new addition to its suburban Chicago plant which increases floor space by 50%. The new addition will house, among other things, a metal forming department to produce the Plate-Mate series of platemaking equipment.

to assist in developing and installing work measurement controls (*Editor's Note*—We assume this refers only to scheduling, workflow, methods and to manpower assignment), and (2) To recommend and to work with an outside consulting firm that offers general industrial engineering services, and in turn the firm could be employed by member newspapers.

In using either of these approaches, the Baldwin committee concurred that each such installation must be tailor-made to a newspaper's own mode of operation.

In its report, a specific suggestion was made. It is to the effect that one industrial engineer's time could profitably be devoted to a series of field investigations in the presumably more progressive member newspapers to look for the smaller special techniques, gadgets and gimmicks, that these papers have developed for their own use. In turn, these might be of general use in the industry.

The Production Engineering committee reports there is considerable duplication of effort among the ANPA Mechanical committee, Research Institute, production engineering and laboratory work. There is also a substantial waste of money in trying to administer and direct the work in two different locations.

The managing director should be responsible to an operations committee within the board of directors of the Research Institute—and to no one else. He should be kept free of all outside pressure.

The Baldwin committee concluded its report: "It should not be the function of the Research Institute, either production engineering or laboratory, to propagandize in attempts to justify what they are doing. This group should be kept free of pressure from all sources and report administratively to a small operating committee."

Two Industry Groups Merge

The proposed merger of the Label Manufacturers National Assoc. and the Lithographers & Printers National Assoc. was approved recently by the vote of LPNA members. The merger, which will become effective after approval by the Secretary of State of New York, was previously approved by LMNA members. It is expected that the consolidation will go into effect early in 1959.

New Heidelberg Showroom—Opening of a new showroom at 180 Varick St., New York, N. Y., was announced recently by Wally P. Lauffs, president, Heidelberg Eastern, Inc. The company's sales and service headquarters will remain at 73-45 Woodhaven Blvd., Glendale, L. I., N. Y. Heidelberg's free courses in platen and cylinder press operation will be held at the showroom.

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FEBRUARY 1959

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